Marine Corps Gazette

MAY 1957
FORTY CENTS

45th Anniversary Marine Aviation

Marine Corps Gazette

MAY 1957
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THIS MONTH AND NEXT The 45 years that have passed since Marine Aviation became a reality have been marked by constant evolution in an effort to achieve the maximum effectiveness of the air arm in support of the Marine Corps' mission. The latest step in this process is the reorganization of the Marine Aircraft Wing and Force Aviation Units to fit in with the new structure of the ground elements of the FMF. This is described by an aviation member of the Organization and Composition Board in the article appearing on page 10. The flight of FJ-4s on this month's cover was painted by staff artist MSgt John De Grasse, in black and white oils.

Next month the Gazette will present, as bonus to its readers, another supplement. The subject of this will be a detailed analysis of the battle of Waterloo in light of today's tactical thinking. The article is the work of a Marine officer who has made the study of Napoleon's campaigns a life-long hobby. In view of this and because of its presentation in modern context, it should be of professional interest to Marine officers.

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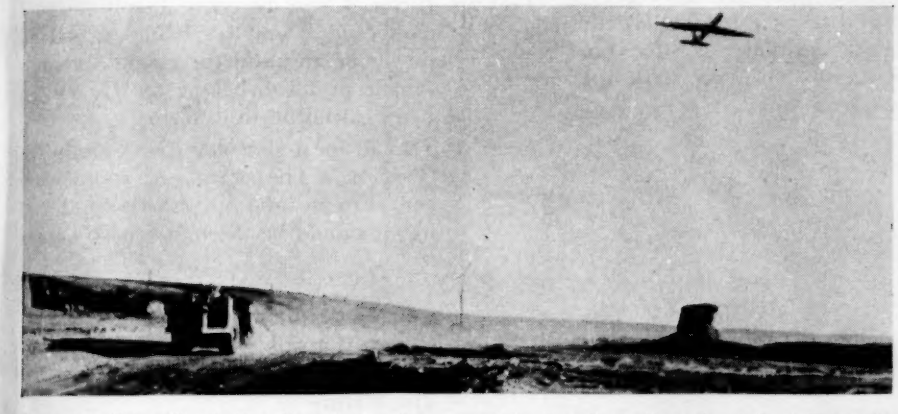
CATERPILLAR

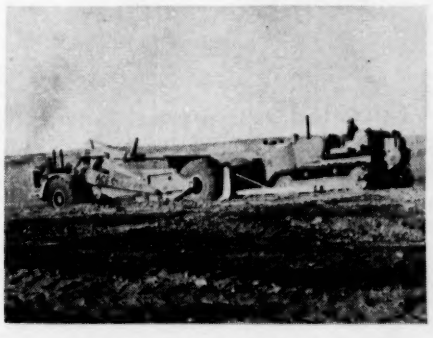
TAKING HAZARDS OUT OF A HILL

$1,259,962 project to provide a safer approach at Ellsworth Air Force Base is speeded to completion with Caterpillar-built equipment



One of 20 Caterpillar-built rubber-tired units engaged in the elimination of a hill at Ellsworth Air Force Base, this two-wheel DW21 Tractor with Scraper speeds glacial till to the waste area.

Besides cleaning up slopes, this D8 is used for utility 'dozing, spreading fill, etc. It is one of five D8s on the job.



Forty seconds for a heaping load is the average loading time in good going for this Cat D9 Tractor pushing a DW21 unit.

WITH B52s scheduled for operation from Ellsworth Air Force Base, Rapid City, South Dakota, the NW-SE runway is being extended 3,000 feet. To permit a flatter, safer approach, a hill about a mile from the runway's northwest end is being eliminated. Although not very high, this hill had claimed two aircraft.

The $1,259,962 contract for the approach zone grading was awarded to C. F. Lytle Company, Sioux City, Iowa. It involves moving almost five million yards of glacial till from the hill. This will open a cut 35 feet deep on a maximum of 1.5 to 1 slope to a point 4,500 feet from the end of the runway, then falling off to a 2 to 1 through the remainder of the cut. It fans out from the end of the runway to 3,000-foot width at the end of the cut. The side slopes are trimmed back 7 to 1.

To speed up the work, Lytle subcontracted half the project to Ace Construction Co., Omaha, Nebraska. The center line of the runway was extended through the cut. Lytle is working the north half; Ace, the south half. Both contractors work two ten-hour shifts per six-day week. And both rely heavily on rugged, dependable yellow machines for high production.

B. D. McMillan, project superintendent for Lytle, has an equipment line-up that includes ten Caterpillar* DW21s with Scrapers, four D8 Tractors and two No. 12 Motor Graders. The DW21s are loaded on a five per cent grade, then speed an average of 2,400 feet in fourth gear to the waste area on the far side of the hill. The waste is spread in one-foot lifts and compacted by the heavy rubber-tired scrapers rolling across it. One D8 is used for push-loading and the other three D8s for sloping, clean-up, spreading fill and pushing when needed. The two No. 12 Motor Graders keep the roads bladed down.

On the south half of the cut, Ace's project superintendent Don Haugan uses five CAT* DW20s and five Cat DW21s with Scrapers on an average 2,600-foot haul to the waste area. Three giant D9s push-load the scrapers. Loading times vary with conditions. In good going, a D9 gets a scraper off with a heaping load in 40 seconds. A D8 does utility 'dozing, cleans up slopes, spreads fill and rips with a Cat-built Ripper when the glacial till is too tough to load. A No. 12 maintains the roads.

On jobs like this, and on every type of earthmoving, contractors find that standardization on Caterpillar-built machines pays off many ways. Maintenance is simplified. Operator familiarity with similar units results in higher production. And the interchangeability of many parts reduces inventory requirements to a minimum.

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Voice of the Taxpayer

. . . Recently I have read with regret several newspaper accounts of the wholesale court martialing of DIs at San Diego and Parris Island for offenses against recruits. Undoubtedly I do not know all the particulars, but I submit that this trend is bad and can, if not watched closely, get out of hand and result in a lessening of esprit, the production of mollycoddles instead of fighting men, and horror of horrors, a falling off in recruiting.

In war, mental toughness and discipline are of more importance than physical condition or familiarity with weapons and tactics. The principal job of Marine Corps Boot Training is, within the short space of 2 to 3 months, to change the average American boy (who previous to that time has led a relatively sheltered life and has had little or no understanding of discipline) into a mentally tough, disciplined, reliable fighting man — one who when the chips are down will curse, feed in another clip and concentrate on killing all the enemy he can before he dies. To accomplish this a shock treatment is required. And shock treatment is what boot training was and should be. Coddling men does not make soldiers.

I have had some personal experience during my sojourn at Parris Island in 1943 with DIs of the type now being punished there and at San Diego. These men are not sadists. They are damn good Marines who are trying to apply the shock treatment needed to make reliable fighting men out of scared boys.

Earlier I said that recruiting may fall off if the trend towards coddling recruits is not stopped. By this I mean that the Marine Corps must not lose sight of the fact that its basic appeal to the young American is the pride of belonging to a tough, highly competent band of brothers that is recognized to be a crack fighting force. The young American may not be a militarist by any means; but if he has to be a soldier he wants to be the best. He wants to belong to an outfit he can be proud of. If the Corps becomes a collection of mollycoddles and cry babies it will no longer be an outfit the young American can be proud to belong to. He will go Army Airborne instead.

I call for a gloves-off discussion in the GAZETTE. The situation seems dangerous to me, and open discussion by all hands should be the best way to handle it.

H. S. JOHNSON
(cc: Commandant, USMC)
Grand Junction, Colo.

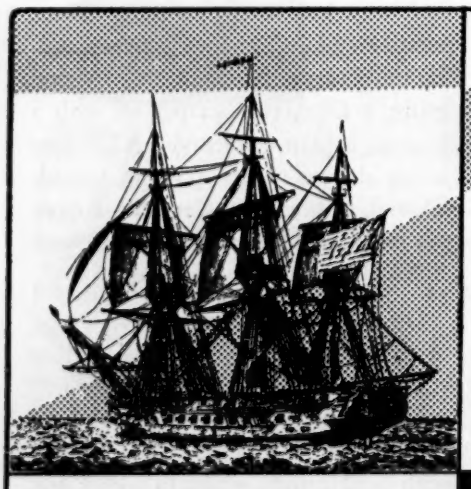
4th Estate

. . . Capt Morrisey's article on Pub-Info is timely and thought provoking.

He should have mentioned, however, that the 4th Estate doesn't shape up too well in some instances.

The reticence of many of our people is due in the main to the following:

1. Quotations lifted out of context from a statement which can, by irresponsible reporting, be twisted to a different meaning.



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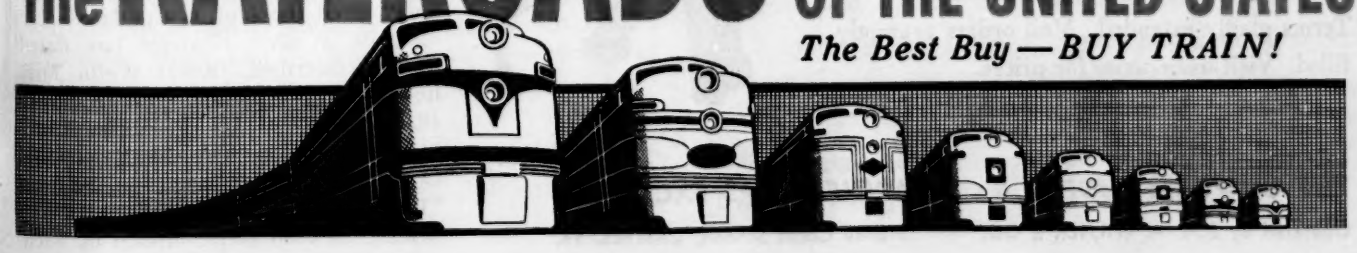

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2. Blowing out of all proportions a commonplace occurrence into a sensational news story.

Example of 2. "Former Marines hold up passengers on train." No mention was made of the fact that these "Marines" were BCDs or undesirables.

COL R. A. MCGILL
1st Mar Div, FMF

. . . Capt R. B. Morrisey's article, *Pub Info — A Command Function,* was indeed timely. It exploded Informational Services problems at ground level. My firm hope now is that all responsible Marines study his plea for assistance and confidence, especially those individuals headquartered on "Cloud Five."

MSGT R. E. JOHNSON
HQMC, Wash, DC.

Royal Welch Fusiliers

ED: *The Feb* GAZETTE *Observation Post carried a piece by LtCol Evans C. Carlson regarding the observance of St. David's Day by the 1st Bn, Royal Welch Fusiliers. A question was raised as to the spelling of "Welch" (or "Welsh") and Col Carlson was queried. He, in turn, passed the question on to the Welch Fusiliers, and the letter below is the answer.*

. . . In a letter written by LtCol Evans C. Carlson, USMC (who dined with the regiment on St. David's Day 1956) to LtCol N. R. G. Bosanquet our previous Commanding Officer, a query was posed concerning the spelling of the word *Welch* as in "Royal Welch Fusiliers."

I have been asked by LtCol Prichard, our present Commanding Officer, to write to you and give any information concerning the answer to this question.

As you may know, the regiment when formed in the year 1689 by Lord Herbert of Chirbury, was known as "The Royal Regiment of Welsh Fusileers." The earliest date where the spelling was changed that I can find is the year 1806, when a silver snuff box was presented to the officers by a Mr. Lenthal, on which is inscribed amongst other things "Presented to the Royal Welch Fusiliers." It may be of interest to note that this snuff box is the only piece of 1st Bn Mess silver which was saved by the then Mess Sergeant, when the ship in which the battalion was returning from Nova Scotia (year 1810) was wrecked. The box is still used at dinner today when the snuff is circulated.

Again, a silver cigarette box dated 1894 is inscribed "Royal Welsh Fusiliers," whereas the Queen's Colour of 1826 has "Royal Welch Fusiliers" embroidered on it. On the Regimental Colour of 1850, "s" is used in the word "Welsh." The Regimental History printed in 1850 and compiled by Rich-

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ard Cannon Esq. is entitled "The Royal Welsh Fusiliers."

I give these examples to show you that there seemed to be a diversity of views within the regiment on the spelling of the word Welch (or Welsh) at times previous to the 1900s. It would appear rather that the whims and fancies of various Commanding Officers set the tone!

Many are of the opinion that the true origin of the "c" comes from the Gaelic spelling of the words Wales (CYMRU) and Welsh (CYMRAEG). The regiment, being of Welsh origin, probably preferred to incorporate the letter "c" from its native language. Enquiries I have made with officers of the Welch Regiment (41st Foot), a regiment considerably junior to us (23d Foot), seem to accord with this view, and they of course use the "c" as well.

After the Great War of 1914-18 the War Office authorized the present spelling i.e. "Royal Welch Fusiliers" and this, we hope, has now taken firm root.

Please forgive me for failing to give you a definite answer to your question. But I write in the hope that the information I have given will be of some use to you.

MAJ I. M. MCCLEMENT
President, Regimental Institute
1st Bn, Royal Welch Fusiliers
BAOR, Germany

Delayed Rebuttal

. . . In looking back over the December issue I note with interest 2dLt Cornell's letter included in the *Message Center* section. Lt Cornell suggests the replacement of all present TE weapons in the Marine rifle platoon with the new light automatic rifles now being tested. He makes the point that the total firepower of the platoon may be thereby increased from 2,660 rpms to 4,725 rpms.

I do not dispute the facts and figures given by Lt Cornell, but I would submit that his suggestion is totally and absolutely impractical. The increased firepower will call for logistic support that will be impossible in amost every situation; the problems of fire discipline and conservation of ammunition within the unit will be insurmountable; and I do not believe anyone in his right mind would suggest that 39 firing infantrymen are capable of getting off 4,725 accurate rounds per minute in any situation. I do not even think our average infantryman can get off 20-30 accurate rounds per minute with the weapon he now carries. Any increase in his firepower capabilities will seriously decrease his effectiveness.

1STLT J. T. DAVES, III, USMCR
W. Palm Beach, Fla.

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Do It Yourself

. . . In the March issue there was a small article in the *Observation Post* which needs comment. I feel it is an example of the type of thinking we should change. It has always been my belief that we had inspections for the purpose of having the troops face the facts of life. When the inspecting party looks them right square in the eye and says something like, "Those shoes look like hell," there can be no worse thing that could happen. In the same way when the comment is made, "Corporal, you are an example of the type of Marine I like," every single man in that organization will envy the man — and next inspection try to evoke the same type comment.

Along this line I feel we find the same attitude in regards to squaring people away at any time. When was the last time you saw or heard some Corporal give some Pfc the word about a sloppy uniform unless they were both from the same outfit? This should go all the way up the line and then we have direct communication of the fact that when it comes to squaring people away you don't have to wait for the chain reaction.

CAPT P. E. WILSON
Rockford, Ill.

To Repel?

. . . T/O # . . . Provisional — 1038 provides that the primary mission of an Infantry Battalion, Infantry Regiment, Marine Division, FMF, is . . . "To close with the enemy, capture or destroy him by fire, maneuver, or shock action *to repel his assault by fire or close combat.*" (Italics provided.)

A grammarian could, and probably would if not Marine-minded, interpret this as being primarily a defensive mission. If corrected by a Marine refusing to accept such an untraditional interpretation he might well recommend that the mission be worded thusly, "To close with the enemy and to capture or destroy him by fire, maneuver, or shock action; or, to repel his assault by fire or close combat."

No battalion commander needs to resort to eisegesis to realize his mission or Headquarters Marine Corps' intent in this instance. However, it is (albeit knit-picking and exaggerated) an example of how, for the lack of a semicolon, we can leave ourselves open to ridicule and conceivably negate what is intended as a positive statement.

It is one more indication that we have relaxed our efforts toward correct administration and good proofreading to too great an extent.

LTCOL J. B. CARPENTER, JR.
1st Mar Div, FMF

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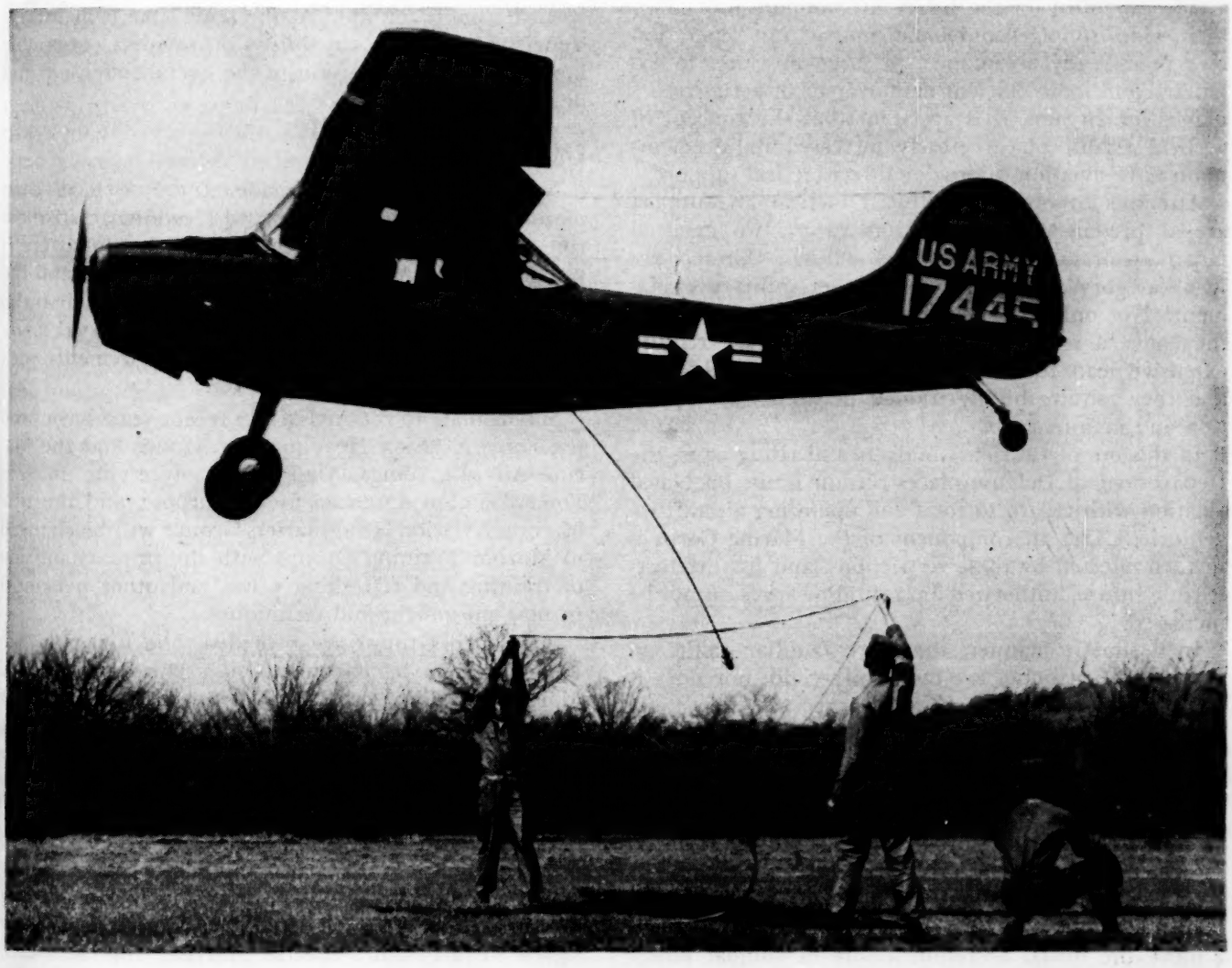


FMF ORGANIZATION AND COMPOSITION BOARD REPORT

AVIATION

THE SECOND OF A SERIES

SURVEY AND REVISION OF THE STRUCTURE OF FLEET Marine Force aviation requires detailed consideration of a variety of important factors. Of overriding importance is the mission and character of the Fleet Marine Force as a whole, and any organization forming a part of it must be tailored to reflect the changing concepts for discharging that mission.

The concept of helicopter mobility influences all Fleet Marine Force structure. Many of the changes in the Division are permitted by reliance on the helicopter as a transportation and reconnaissance means. Other changes are feasible because of the capability of the Marine air-ground team to employ its organic air attack capability in the heavy fire support role. Further, wide frontages and basic combat unit separation owe their ready acceptance, in large measure, to expanded and more efficient employment of aerial reconnaissance. In sum, it is apparent that the concept of vertical assault places greatly increased requirements upon FMF aviation to provide direct tactical support.

Attempts to provide increased tactical air support are at present categorically limited by two external factors — aircraft and personnel ceilings. Aircraft are in a category quite apart from other military equipment. Not only are they expensive and complex, but they have a relatively short useful life, they require extensive lead time in development and production, and they require highly trained personnel for operation and maintenance.

In this era of restricted budgets and rising costs, the Department of Defense places certain limits on Naval aviation with regard to total and operating aircraft inventories. The air component of the Marine Corps is in turn affected by these restrictions, and for the foreseeable future, authorized aircraft allowances cannot be increased.

In a similar manner, the more familiar limits on authorized personnel are essentially rigid, nor does it seem reasonable to alter to any appreciable degree the current allocation of Marine Corps personnel between air and ground. Thus, certain inflexible guidelines circumscribe the size of FMF aviation.

FMF aviation cannot be drastically altered in character, for the Marine Corps is responsible for performing certain combat air functions. Inherent within the roles and missions assigned the Marine Corps is that of providing combat forces, both ground and air, to achieve the initial accretion ashore of combat power transferred from the sea. Landing forces with fleet assistance, therefore, must be capable of seizing and defending, against ground and air resistance, the designated objective area ashore. Obviously, this view of the landing force carries with it the requirement for an appreciable capability to repel enemy air attack.

This capability must be truly expeditionary. By so specializing, the Marine Corps fills a distinct slot in the defense structure of the country. Recommended changes in lower echelon units of the Marine Aircraft Wing are pointed toward reduction of weight and cube of squadron equipment with this idea in mind.

The Fleet Marine Force aviation structure discussed below provides a maximum capability to meet the requirements for tactical air support imposed by the vertical assault concept. At the same time it maintains sufficient combat air capability to provide a reasonable landing force contribution to the overall offensive and defensive air effort.

FMF LEVEL

No essential change is made at the AirFMF command level. A Headquarters and Headquarters Squadron for the support of each AirFMF headquarters is provided. The AirFMF commander will command the FMF units assigned, will be responsible for their training and readiness, and will co-ordinate naval aeronautical logistic and administrative requirements with the respective fleet air commander.

Subordinate to the AirFMF in recent years have been the Force Aviation Headquarters Groups and the Marine Aircraft Wings. Designation of certain units as Force Aviation serves no useful purpose, and the title of Force Aviation Headquarters Groups will be changed to Marine Training Groups with the primary mission of training and refreshing pilots and other personnel in new equipment and techniques.

Two such Groups are provided, one for each AirFMF; each to be composed of a Headquarters and Maintenance Squadron, a Marine Fighter Training Squadron, a Marine All-Weather Fighter Training Squadron, a Marine Attack Squadron and a Marine Instrument Training Squadron.

WING ORGANIZATIONAL PHILOSOPHY

The squadron is the basic unit for operation of aircraft; it is the basic unit for structuring an air organization. It is a T/O type unit. Each squadron is designed to carry out a specific function, that is, attack, intercept, reconnaissance, transport, control and service-support.

Combining squadrons into groups for specific purposes, and further combining groups into wings is sound organizational practice, either for administrative or operational purposes. Such combinations permit centralized control of training in the functions to be carried out and at the same time provide a flexible framework for transfer of squadrons between groups and groups between wings to permit the air commander to accomplish any particular mission. In this sense, groups and wings closely resemble task organizations designed for a specific purpose.

A wing, composed of either functional or composite groups, is the smallest air unit with the capability of command and control of subordinate elements in the execution of air and direct air support operations.

THE MARINE AIRCRAFT WING

Despite the fact that rarely do two Marine Aircraft Wings resemble each other in detail, a Marine Aircraft Wing is a distinct entity. As indicated by the organizational chart, the typical wing is composed of functional groups which provide a balanced aviation force capable of executing all essential air support tasks for an air-ground task force of wing-division size.

THE MARINE WING HEADQUARTERS GROUP

The Wing Headquarters Group is composed of a Headquarters and Headquarters Squadron, one Marine Air Support Squadron and 3 Marine Air Control Squadrons. This group contains all the essential elements of the wing command echelon and the air control system. The Marine Composite Photographic Squadron is no longer included in this group in order that the group need not be established at or near an air base. It can, therefore, land early in an amphibious operation to establish ashore the means to command and control landing force aviation and such other air units as may operate in the area.

The capabilities of the Marine Air Support Squadron of this Group are enhanced by an additional Air Support Radar Team. Essentially the best current means of providing all-weather air support, 3 such teams in a Marine Aircraft Wing add valuable flexibility to its combat employment.

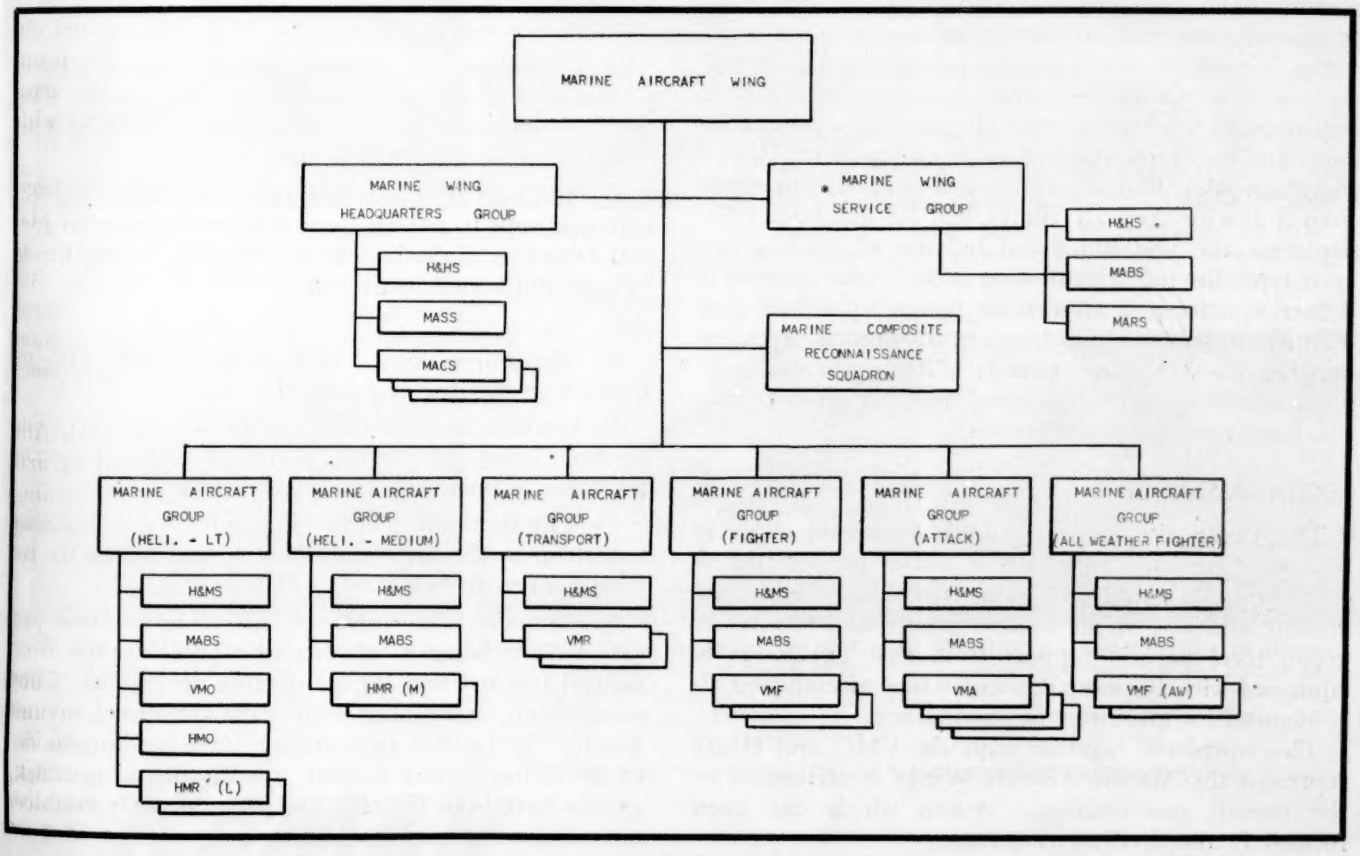
MARINE WING SERVICE GROUP

An essential element of the wing is the Service Group which is normally established at a rear base within supporting distance of the objective area. It consists of a Headquarters and Headquarters Squadron, a Marine Air Base Squadron and a Marine Aircraft Repair Squadron. These subordinate elements of the Group provide wing-level service for all squadrons and groups of the wing. Principal among these service responsibilities are centralized control of supply (H&HS), wing-level aircraft maintenance (MARS) and operation of the rear area air base (MABS). Normally the Transport Group operates out of this base.

TRANSPORT CAPABILITY

Approximately 30 per cent of the assigned aircraft of the wing are in the transport category. Two helicopter groups and one fixed-wing transport group are provided. The light helicopter transport group, in addition to a Headquarters and Maintenance Squadron and an Air Base Squadron, contains a Marine Observation Squadron (VMO), a Marine Helicopter Reconnaissance Squadron (HMO), and 2 Marine Light Helicopter Transport Squadrons (HMR(L)).

The VMO is a small squadron to operate 12 light



fixed-wing observation aircraft of the OE type. It is the only squadron in the group that requires anything at all approximating a prepared runway.

The HMO is a composite squadron of 12 HUS/HRS types and 12 HOKs. This squadron is designed specifically to provide tactical support for the new Division Reconnaissance Battalion in the conduct of reconnaissance operations. In addition, it can provide air evacuation for all division units, and perform such miscellaneous tasks as courier service and wire laying by helicopter.

The 2 HMR(L) squadrons are composed of 24 HUS helicopters each.

The total complement of the light helicopter group is 64 HUS type aircraft, 12 HOKs and 12 OEs. Its mission is oriented explicitly to fulfill division requirements.

The medium group contains a Headquarters and Maintenance Squadron, an Air Base Squadron and 2 HMR(M) squadrons, each of 15 HR2S aircraft.

The total lift capability of the 2 groups at one time is on the order of 1,500 personnel, or the approximate equivalent of a Battalion Landing Team.

The longer range transport function is handled by the Marine Transport Group. It consists of a Headquarters and Maintenance Squadron and 2 fixed-wing aircraft squadrons of 15 aircraft each. These squadrons will be capable of providing in-flight refueling interchangeably with cargo and personnel transport when aircraft are available to the Marine Corps with the potential for carrying out that dual role.

COMBAT CAPABILITY

The combat power of the typical wing is contained in 3 functional groups: one fighter group, one all-weather fighter group, and one attack group. The command, support and maintenance capability of each group is compartmented into 2 squadrons: a Headquarters and Maintenance Squadron and a Marine Air Base Squadron. Each Marine Aircraft Group is designed to command and support 2 to 4 tactical squadrons. Under the assumption that short of a general war, not more than 2 Marine Aircraft Wings will be simultaneously deployed, the best functional balance of combat aircraft types for the typical wing is set in the ratio of 3 fighter squadrons, 2 all-weather fighter squadrons and 4 attack squadrons. This balance, adjusted as necessary between the 3 Marine Aircraft Wings, provides optimum flexibility in task regroupment for strategic deployment and operational needs.

RECONNAISSANCE

The Composite Reconnaissance Squadron (VMCJ) is a separate squadron with a distinctive functional capability. In actual operations it will be based on an airfield with one of the combat groups and receive its group level logistic support from that group. It is equipped with 10 photo reconnaissance aircraft and 10 configured for electronic reconnaissance.

This squadron, together with the VMO and HMO represent the Marine Aircraft Wings' contribution to the overall reconnaissance system which has been formed in the division-wing team.

MANNING LEVELS

The typical wing will operate slightly less than 400 aircraft of all types. Personnel are provided in the proposed T/Os to operate and maintain them at an aircraft utilization factor of approximately 65 flight hours per aircraft per month. Because peacetime budgets for operating expenses usually preclude realization of such high utilization factors, it is neither necessary nor desirable to actually man the wings at full strength.

The recommended overall FMF aviation structure, manned at approximately 80 per cent for pilots, 65 per cent for aviation ground officers and 90 per cent for Marine enlisted, is adequate for employment short of general war. It should be adequate at such manning levels to meet force-in-readiness requirements and limited combat employment.

SUMMARY

The essential differences between this wing and the current L Series T/Os are summarized as follows:

a. *Squadron level.*

1) Reduced maintenance, supply and supporting personnel in VMF/VMA squadrons, caused partially by the reduction in aircraft from 24 to 20, and partially by movement of some service functions to higher echelons.

2) Reduced number of pilots due to lowering of pilot/seat ratio in combat squadrons and reduction in aircraft from 24 to 20.

3) Consolidation of S1 and Adjutants' sections accomplishing a reduction in administrative personnel.

4) Increase in the VMCJ squadron from 18 aircraft to 20.

b. *Group level.*

1) Elimination of all Exchange and Special Services personnel except for a special staff section at wing level; elimination of all barbers, and reduction of security personnel in VF/VA Groups.

2) Addition of communications personnel in helicopter groups to permit those units to operate air control teams in embarkation and landing zones during tactical and logistical air lifts.

c. *Wing level.*

1) Addition of one ASRT to the MASS with no increase in number of personnel.

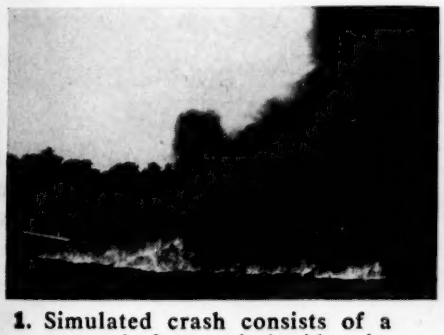
2) Increase in responsibilities of the Marine Wing Service Group to provide pool-type motor transport resources to operating groups and squadrons.

3) The formation of the Helicopter Reconnaissance Squadron as the air counterpart to the Division's Reconnaissance Battalion.

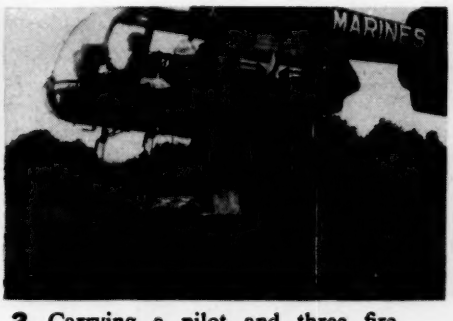
In summary, the results of this reorganization provide a closer balance between air capabilities for direct tactical support and for air defense operations. They, in addition, accomplish significant personnel savings. Finally, by further centralizing servicing capabilities in the Wing Service Group, squadrons and operating groups have been lightened to promote early establishment ashore of operating units. USMC

FLYING FIRE ENGINE

The Kaman HOK-1 helicopter is famed for its versatility and adaptability to a variety of uses. Based on an actual incident, the photos below show how the HOK-1 can be used effectively as a piece of fire fighting equipment and local crash rescue vehicle.

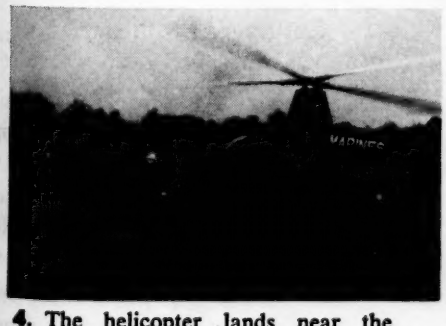


1. Simulated crash consists of a scrapped plane soaked with aviation gas and jet fuel.



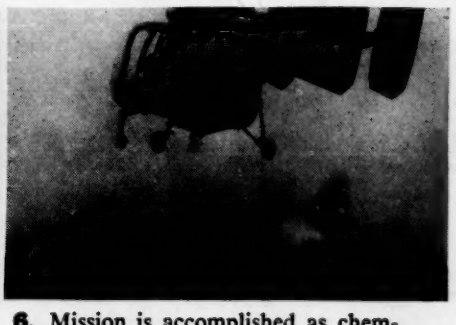
2. Carrying a pilot and three fire fighters, the HOK hovers over fire fighting equipment while ground crewman hooks it to the ship.

3. Flying to the crash scene, the HOK hovers and sets the fire apparatus on the ground automatically.



4. The helicopter lands near the equipment and discharges firemen who begin immediately to unreel the hoses.

5. Hovering over the flames, the HOK uses the powerful downwash of air from its rotors to beat down the fire. Firemen go into action.



6. Mission is accomplished as chemicals open path for the rescue of the "pilot." Elapsed time from arrival on the scene — 45 seconds!

Kaman's continuous research is helping to keep our National Defense effort strong.

KAMAN THE KAMAN AIRCRAFT CORPORATION, BLOOMFIELD, CONNECTICUT

Decorations and Awards

Italics indicate posthumous awards.

SILVER STAR MEDAL

Sgt Charles R. Powers
H&S Co, 3d Marines
Bougainville 18-26 Nov 1943

PltSgt Thomas C. Doherty
D Co, 1st Bn, 5th Marines
Cape Gloucester 24 Jan 1944

Pfc Ronald D. Strommen
C Co, 1st Bn, 7th Marines
Korea 28 Nov 1950

Cpl Harold W. Shanks
A Co, 1st Bn, 5th Marines
Korea 16-17 July 1953

2dLt Mortimer W. Cox, Jr.
I Co, 3d Bn, 1st Marines
Korea 24-25 July 1953

DISTINGUISHED FLYING CROSS

1stLt Harold R. Mackey
VMF 311
Korea 23 May 1952

Capt Arthur C. Rubenstein
NAS
S. Weymouth, Mass. 5 Dec 1955

1stLt Robert F. Patton
H&MS 12
Korea 15-16 Dec 1955

GOLD STAR in lieu of a second award DISTINGUISHED FLYING CROSS

Capt Stanley E. Adams
VMA 212
Korea 27 June 1952

GOLD STAR in lieu of a third award DISTINGUISHED FLYING CROSS

Maj Robert Floeck
VMF 214
Korea 15 Sept 1950

NAVY AND MARINE CORPS MEDAL

Pfc Eston D. Extine
H&MS 12
Korea 16 Dec 1955

2dLt Leonard B. Stolba
NAAS, Foley, Ala. 7 Feb 1956

Cpl John E. Weis
Wpns Co, 3d Bn, 8th Marines
Camp Lejeune, NC 10 Feb 1956

1stLt Frank J. Dorsey
VMO 6
Camp Pendleton, Calif. 1 May 1956

BRONZE STAR MEDAL

Sgt Lloyd Ball
H&S Co., 1st Bn, 5th Marines
Korea 17-18 Aug 1950
(US Army award)

2dLt Roy M. Du Charm
H&S Co, 7th Marines
Korea 3 Nov 1950

GOLD STAR in lieu of a second award BRONZE STAR MEDAL

2dLt Roy M. Du Charm
H&S Co, 7th Marines
Korea 27 Nov - 10 Dec 1950

Maj Henry J. Woessner, II
7th Marines
Korea 2 Oct 1950 - 9 June 1951

AIR MEDAL

Sgt Joseph R. R. Cantin
H&MS 12
Korea 15-16 Dec 1955

GOLD STAR in lieu of ninth award AIR MEDAL

Maj Robert Floeck
VMF 214
Korea 8-20 Sept 1950

COMMENDATION RIBBON WITH PENDANT

Cpl Alfred B. Hughes
Oceanside, Calif. 12 Aug 1955

TSgt Robert G. Stemper
Atlantic Beach, NC 21 Aug 1955

Pfc Joseph M. Thein
Iwo Jima 12 Feb 1956

Pfc Ronald S. Turnbow
Iwo Jima 12 Feb 1956

Cpl Eugene R. Jefferies
Morehead City, NC 23 Mar 1956

LETTER OF COMMENDATION

Maj Albert N. Bailey
HQMC
Wash, DC May 1949 - June 1956

Sgt Emanuel G. Hessler
1st MT Bn
Santa Monica, Calif. 10 Sept 1955

Sgt Charles P. Neadow
MCS, Quantico, Va. 16 Oct 1955

Pfc Paul R. Miller
1st Bn, 9th Marines
Bangkok, Thailand 15 Feb 1956

This warhorse doubles as a pack mule!

The Fairchild C-123 Assault Transport is now doing double duty.

In combat maneuvers, it demonstrates day after day how it can operate out of pastures and clearings barely large enough for light planes; and on logistical missions, it has proved itself as a highly efficient bulk cargo and troop carrier.

Recently, in Germany, 30 C-123's moved 11,000 men and 2000 tons of equipment clear across Bavaria . . . in an even five days.

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It embodies the performance, the reliability—the unlimited usefulness which distinguish aircraft designed and built by Fairchild.

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the TEN BEST

Books with which to begin a professional library

Prof. W. H. Russell

THESE PROFESSIONAL READINGS ARE BOTH PERSONAL and fragmentary; sound qualities, too, because this GAZETTE feature merely points toward a door each man must open for himself. In that spirit you will find here short readings which skirmish ahead of increasingly heavier units, and on the premise that — as in other pleasures — appetite for professional reading thrives upon successful experience.

Hemingway's single volume provides an excellent skirmish line. If you prefer chronological order, read first how the lightly armed David beat Goliath, a sluggish old pro, in history's first record of man's combining fire, movement and shock in their proper proportions. In another Hemingway selection Xenophon, the Greek lawyer turned combat leader, will foreshadow for you that epic march from the Reservoir by the 5th and 7th Marines. Later Hemingway has Joinville describe in realistic detail how French crusaders established a beachhead in Egypt, only to bog down among her tangled watercourses. Like these fragments, many other Hemingway items comprise the advance guard for a whole shelf of fruitful books.

Part II of the list marshals integral units, still relatively light but each complete in itself. *The Civil Wars* may well show Caesar to you in a new role, as a master of amphibious war. Woodham-Smith throws unsympathetic light on the 19th Century British Army, but in the process elucidates Tennyson's *Charge of the Light Brigade.* If you have not yet read duPicq you will wonder whether he might have served under another name in the "Old Corps." And Masters' very recent work dwells sharply on the dilemma of troops who must civilize an enemy even as they subdue him.

Part III provides the heavy units which really challenge. Each is a classic. Xenophon and Arrian present campaigns covering the whole Middle East; and the latter lets one see that Alexander would have been Great in any army. Polybius and Tacitus bracket the Roman Legion; first as it became mature against Hannibal, and later after disregard for the infantryman's personal dignity had corrupted its power. In his *Roots of Strategy* Phillips selects excerpts from the wisdom of Sun Tzu, Marshall Saxe, Frederick and Napoleon. In this process he reveals how the ancient doctrines came down to our own time. The *Personal Memoirs of U. S. Grant* emphasize dramatically what happens when fate gives the good soldier a second chance. And Lawrence's book presents all the elements of today's Arab-Israeli problem, as well as a brilliant dissertation on guerrilla warfare amid primitive peoples.

Collectively the books grouped in Part III emphasize how the history of combat technique is a seamless garment. Thucydides, an admiral thrown to political wolves, presents the great amphibious war whose study Gen George C. Marshall recommended so highly that June day in 1947 when he advocated publicly for the first time the national policy which bears his name. The CCF forces in Korea trained under men who had studied Lawrence's *Seven Pillars;* while in his turn Lawrence admits a heavy debt to Xenophon. And Adm Arleigh Burke, the Chief of Naval Operations, has said recently that reading in Polybius about Scipio Africanus' campaign on the North African plain led directly to the DD shock tactics Burke pioneered among the Solomon Islands in 1943.

If you, too, would become like these men, understanding both the good and evil of military command, go thou and read likewise.

I

Men at War, edited by Ernest Hemingway.

II

Caesar, *The Civil Wars,* A. G. Peskett (trans.).
Cecil Woodham-Smith, *The Reason Why.*
Charles Ardant duPicq, *Battle Studies,* Greeley & Cotton (trans.).
John W. Thomason, Jr., Capt, USMC, *Fix Bayonets!*
John Masters, *Bugles and a Tiger.*

III

Xenophon, *The Persian Expedition,* Rex Warner (trans.) (Known in most editions as *The Anabasis of Cyrus).*
Arrian, *The Anabasis of Alexander,* Edw. J. Chinnock (trans.); found in vol. II of *The Greek Historians,* F. R. B. Godolphin.
Thucydides, *The Peloponnesian War,* Rex Warner (trans.).
Polybius, *The Histories,* W. R. Patton (trans.). Read Book 3 in Vol. II and Book 15 in Vol. IV.
Tacitus, *The Complete Works.*
Thomas R. Phillips, *The Roots of Strategy.*
U. S. Grant, *Personal Memoirs.*
T. E. Lawrence, *Seven Pillars of Wisdom.*

The National Geographic Society publishes a map of the Mediterranean entitled *The Classical Lands* which supplements well works dealing with ancient or medieval history. USMC

THE FLIGHT HEARD 'ROUND THE WORLD

Recently three B-52 bombers flew around the world in 45 hours and 19 minutes. They were only specks in the vastness of the sky, yet they were in voice-contact every mile of the way—with SAC headquarters in Omaha, with each other, with bases along the route and with the KC-97 tankers that refueled them in the air.

Their speed-of-light contact was the AN/ARC-21 liaison communications set in each of the ships. This is a long-range, pressurized, high-altitude airborne system, capable of world-wide communications. It may be operated by the pilot, so no radio operator is needed. It is characterized by minimum training requirements, simplified maintenance, high reliability, positive channel selection —with a choice of any 20 of 44,000 frequencies.

In this as in other ways, RCA serves our Nation's armed forces. RCA scientists and engineers are constantly creating, designing and producing new and better electronic systems and equipment.

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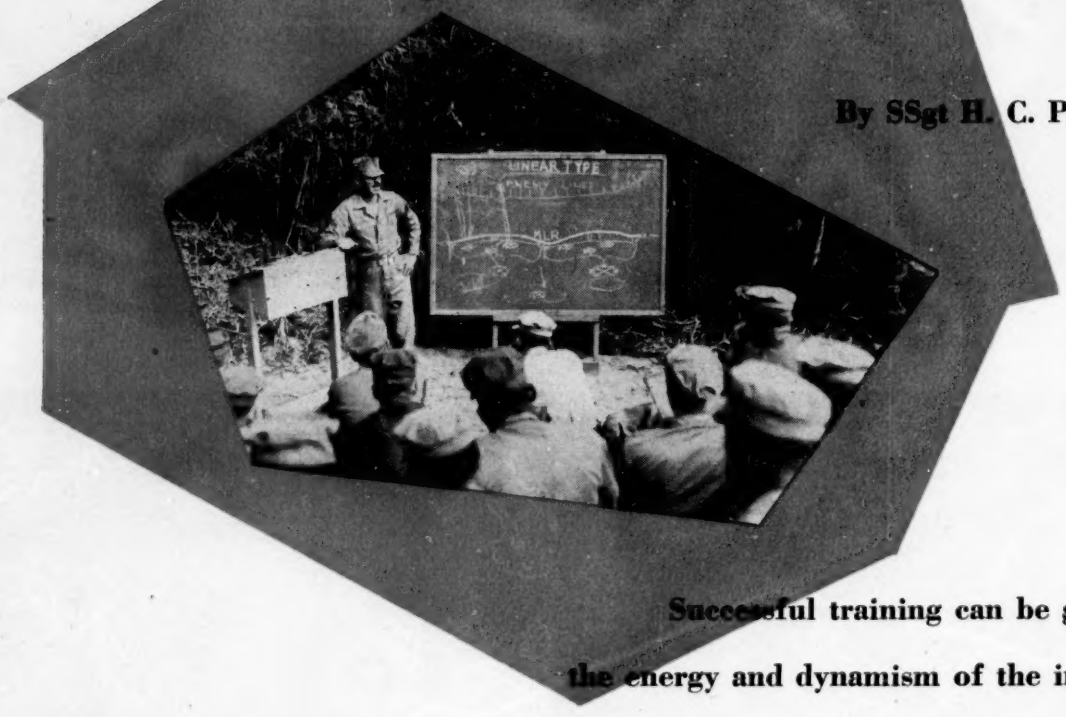
RADIO CORPORATION of AMERICA

DEFENSE ELECTRONIC PRODUCTS *CAMDEN, N. J.*

Red and Gold Schoolhouse

By SSgt H. C. Puckett



Successful training can be gauged by the energy and dynamism of the instruction

OUR RED AND GOLD SCHOOLHOUSE is in a sad state! The blackboard is cracked, our teachers are less than dynamic and our students are just not interested. The happenings on the last, and the preparation for the next liberty tends to draw them away from their 'larnin.' Agreeing that liberty is a large part of any Marine's life, we must also agree that despite its attraction, it will not teach us our jobs as professional Marines or one-term Regulars. It appears that the educational process is generally divorced from entertainment—and that is true. One cannot merge such opposites—one of incurring a calculated behavior and the other of releasing tensions from everyday living—and expect the best results from either. If we as NCOs and officers really wish to get good results from our training, we must motivate our students in spite of more attractive distractions. Too often we present ourselves before our captive audiences with a mien composed of pomposity and sheer boredom. We then commence to expound in all directions on a subject we have assiduously studied for at least an hour. While wandering across the stage in our hand-grasping, knuckle-cracking, 'himm-hawwing' manner, we are amazed to notice a goodly share of our students affixed with a glassy stare; some are in the forbidden Land of Nod. Indignant? Piqued? You bet! We snap the miscreants back to reality by slapping the lectern and shouting invective laden condemnations upon them—and rue the day an evil jinni assigned us to instruct.

Now let's take a purely hypothetical situation. *All* the troops have remained awake and attentive; a course of instruction has been offered; the summary has been given and we ask: "Any questions?" "No?" "Class dismissed!"—all with lightning rapidity. We have forgotten or glibly ignored that individuals within a mass are reluctant to ask questions unless subtly coaxed and encouraged by the instructor. But, not fighting the tide, we accept the silence as the total response and negate *another* period of formal training. In a few hours, the troops will have forgotten the material presented to them and we will consider it all a waste of clean tropicals and, of course, that hour spent in preparation.

When Man first learned that by swinging a club or fist at a neighbor he could keep his own or acquire more property, military training was neither important nor needed. But as he climbed from the primordial ooze, he began to appreciate the fact that the one who had the proper and most correct military training was the one who carried the field. Caesar's legionary was not very impressive from an appearance standpoint: he was short, of medium build and was not as ferocious as we like to believe, yet he could carry 60 or more pounds on marches—and the marches often proved to be 70-100 mile jaunts through the boondocks and a good deal of that at a trot!

In Gaul, their enemy formed a usual ratio of 10 to one. They also fought on their own terrain. The Gauls were ferocious and were physi-

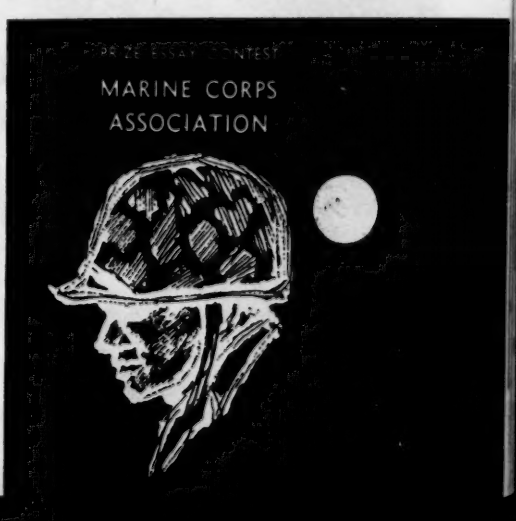
cal giants compared to the Romans, yet the Latin soldiers somehow managed to slice such superior troops to ribbons repeatedly! When the Romans failed to carry the situation because of a tactical blunder, the fall-back was in good order. Just what energized the Romans? *Training*! He trained every day and he knew why. His commanders, centurians and guides knew their jobs and so could instruct their men with great effectiveness. The troops were heterogenous, that is, they were a mixed lot of Romans, Gauls, Africans, Asiatics and Orientals. Doubtless, this lack of homogenity in personnel make-up gave rise to many problems in control and instruction. History certainly indicates that the Roman leaders rose to the challenge and were successful in forming a proper atmosphere, example and training schedule for their troops. With the usual inducements of looting, rapine and prorata pay lacking, it was probably quite a job. Solidarity missing in personnel make-up, and the usual troop motivations eliminated, a high degree of unit pride and personal loyalty to immediate superiors were the keys to successful control. Formal training was intense, originating in the lowest tactical group – the maniple – and ending with the legion.

Success in battle was the sole end of such practice and instruction. And as insurance for this, each officer and man had to be proficient in all arms and was taught to assume the next higher rank. Sound familiar? It should! We Marines are exhorted to learn our arms well, to prepare for the next higher rank, to live the soldierly life and to set a good example. We are also urged to study and analyze military publications and even to make suggestions for better operational or tactical methods. In our response we have dropped the ball. Our nation, always wary lest the military become too powerful, has slowed in producing the type of individual to whom military life is attractive or, if not attractive, at least passably acceptable. Factors governing this are nebulous, but certain contemporary thoughts concern ing adult-juvenile relationships stand out as contributory elements. Civil educational techniques have helped to produce individuals who are remarkably free of scholastic and social discipline. The modern "relaxed, progressive" school stresses the decentralization of goals and a program that often resembles extra-curricular activities rather than a program of systemized study. Education per se is a basic knowledge of the past to provide possible alternate solutions for problems in the present and future. It is a result of the learning process which depends on material, stimuli, repetitive presentation and lastly, favorable response. These hinge on the brain's acceptance of new neural pathways formed by modification of thinking habits. By mental spoonfeeding and a coddled curriculum, educators have attempted to make schooling painless and as a result new pathways either fail to grow or, at best, are weak and often regressive. Thus we see in our military audience many to whom learning and education are genuinely repugnant. Weakening of family integrity plays a very important role in the production of our Pfc Johnny. Because of the demands of WW II many fathers were absent and a great number of mothers engaged in defense work during the formative years of a majority of our troopers. These men grew up in day or night care home without proper familial ties and guidance and so are now without a highly developed social conscience and sense of personal discipline.

The media of mass communication too has helped form our Johnny. Much of the literature and many of the films after WW II were of a cynical nature and made it visually and graphically apparent that it was fashionable to be a social rebel. Too, a vast amount of material written and filmed on the military depicted the Military Services as an assembly area for moral misfits, has-beens and martinets. Military personality presentations are usually out of contact with reality; class relationships are not true to form; professional soldiers and short-timers are stereotyped—and none too flatteringly—leaving a definite negative impression in the minds of our younger troopers and there is not too much we can do to erase false impressions. Draft legislation has caused our youth to view military duty as something less than desired. *We* know the importance of having as many men as possible trained for potential participation in combat and, as troop cadres, we have as one of our main functions the responsibility of training citizens into reliable comrades for our Regulars. The ranks of the Regulars are always thin and without the civil population providing troops, any war in which only Regulars would be committed would be a Cannae for our nation.

We are, at this lull between battles, interested in the correct training of our cadre, and many of our young Regular Marines have chosen the Corps to "sweat out" their obligated service on active duty with little or no intention of remaining Regular. They simply wish to exist and then go. We can appreciate their feeling of active non-interest, but we have the prime mission of protecting our nation from defeat through offensive or defensive combat and therefore cannot fail in training our troopers to meet, *not* the minimum standard, but the maximum standard of combat readiness. Training is not a singular expression of human endeavor – far from it. Training encompasses orderliness of thought, co-ordination of response, orientation, formalized education, morals and tactical "know-how." No one period of the day can be truly defined as "training" and though we humans overcategorize things, a period of training such as "platoon tactics" is actually but a segment of the overall training. In short, training in its full sense is the correct environment necessary for a specific behavior. We can all look back with varying degrees of the shudders to our frantic life in Boot Camp and recollect that our training started at 0500 when we

HONORABLE MENTION GROUP III



were kicked unceremoniously from our warm little nests into the panic-rife routine of becoming fledgling jarheads. Each moment was part of training: marching here, running there, learning the mechanical marvel the M1 rifle, washing our dungarees—all of it was part of the theme. The attitudes, demands and cautions of our DIs were training. From 0500 to 2200 when the field music played taps, each moment was carefully plotted to bring about a calculated response. We are all interested in training: HQMC defines the state of training equal to the tactico-strategic quality of the Corps. Staff and field officers gage their unit's effectiveness through the degree of training. Company grade officers implement training as the means by which troops acquire ability and utility with weapons and tactics. Senior NCOs measure their own ability and utility by the degree their companies or platoons are trained. But the *troops* consider training a bore, unnecessary and time consuming—and will often choose such time to put in for allotments, volunteer for guard and make requests—just about everything to escape instruction. Continued wishes to escape will exist so long as senior NCOs consider training to be a bother, so long as they produce poor presentations, so long as they communicate *their* dissatisfaction with teaching. Our troops are neither stupid nor insensitive: detection of an unenthusiastic instructor or an ill-prepared one is instantaneous. Another deterrent to the success of training lies with commanding officers and department heads who are more interested in "production," i.e., everyday routine or operational demands. Higher level commands often cause confusion by supplementary training programs and do so with alarming frequency when even the successful fulfillment of MCO 1510.2 is yet unrealized. (MCO 1510.2 defines the degree and scope of formal training for a specific organization.)

We need the training; we *can* train. The powers that be have written complete procedures for the presentation of training, but on the levels where the troops are in actual contact with the instructor, the whole machinery tends to bog down. Organization and correct methods are not only available to us but have been for years. We drop the ball by failing to implement these known, proven systems of training and failing to accept the reality that training is a 24-hour job and involves all phases of military life, not one restricted to a dusty corner in the hangar or a drafty station theater. Some of the previous statements already cover reasons for our troops' disinterest and our instructors' lack of enthusiasm. These reasons make it clear that even an enthusiastic instructor will have a rough time with students whose background and preconceived attitudes are not conducive to training.

So far this paper has been essentially negative. I wished to present the mechanics, aims and results of training a military body, plus the failings of same and possible causes for them. Our potential enemy has a well defined military training program and although a percentage of that is purely political it is safe to say the soldiers are well oriented and schooled on military lore. An average day would find Pvt Ivan up at 0600 and asleep at 2300 and in those intervening hours much time would be devoted to formal training and the rest to general training. We can do no less. If we accept less, we are endangering our national security, military strength and pointing the way to an easy grave.

Now let's see what we can do to actively implement formal training and to personally insure that our unit, individual conduct and orders all help position and direct our troops towards a greater degree of unity and military proficiency. Since we as senior NCOs and officers have taken over the role formerly assigned to parents and guardians, we have the responsibility of teaching our troops by example, instruction and positive leadership. To fail in any one phase is to weaken the other two and to minimize the total desired effect. What we do, say, approve or disapprove of, makes a definite impression on our Marines. Though we may pay it lip service, our personal example in discipline, moral qualities and military prowess is less than desired. Both by official legislation and our own admission we are leaders and we establish a norm that is good for neither the Marine Corps nor the trooper watching us. As stated before, we cannot erase the effects of past environment, but we can create a more favorable one for our goals.

Our instruction should be thorough and routine and planned through mutual co-operation between the commanding officer, department heads and commissioned and enlisted instructors. The guide should be primarily the aforementioned reference, MCO 1510.2. The aims and goals for each quarter should be analyzed as to whys and wherefores—and this *can* be done. The information program which

Training is the sum of all military experience

currently amounts to 2 hours a month was initiated so that the mass of troops is familiarized with a current problem whose content is important in world affairs. Now this may be on Communism with either civil or military application, on general news developments and how they tie in with local maneuvers or deployments, or perhaps on justice and civil rights situations. Whatever it is, there should be a continuity throughout the lecture or group of lectures. To this end, a lesson plan —the bugaboo of all instructors— will aid tremendously. In the lesson plan coherence is made or lost.

In purely military topics, a complete syllabus should be made for each subject with a lesson plan and a training aids guide contained therein so that *any* instructor with the mechanics of instructing well established can teach any subject. Naturally, the optimum instruction is contained with an instructor whose own personal background will augment such a formalized guide. Much has been written about our alleged unrealistic small arms firing. Too often our instruction has covered only firing and sling positions and little or no real instruction on the deployment of rifle fire. Full coverage or at least coverage of all the salient features of rifle fire should develop a keener reaction from the trooper on the firing line. Evaluation of the instruction should be in its application but, as in the grenade and technique of rifle fire courses, it is usually unfeasible for aviation units to do this. Good objective tests will at least give an indication of how much learning has been achieved. This does not call for a long test, but for a good one. It should be drafted by the instructor and carefully scrutinized by the training officer. The aim of training is combat readiness and although operational and routine production is important and is a part of training, formal instruction in basic subjects should not be downgraded and left to random scheduling and mediocre instruction. It should be given careful attention accompanied by careful selection of the training Officer and NCO. With these men rests the co-ordination of time, space and personnel and, therefore, the effectiveness of instruction. Charts depicting not only the unit degree of completion but also that of the individual trooper should be made. These charts should also indicate the degree of participation in outside educational sources such as MCI, MCS, USAFI. From these charts and curves the commanding officer can readily determine the degree of completion in any field of training and can predict with greater accuracy the combat, operational and tactical prowess of his unit. We must watch the level of absenteeism for in that lies a great source of weakness. Training is for education—not for coffee-runs, allotments at the office or for haircuts. Meetings between senior NCOs and department heads should help to remedy this. Each man who is absent is one more man who is uninformed. Naturally the caliber of our instruction should be such that if a trooper is absent from it, he has really missed something.

Positive leadership is not exemplified by autocratic buffoonery nor in condescending attitudes. It can not be found in a compromise between the two. Since leadership lies in the art of influencing others towards a defined goal with a minimum of friction and a maximum of efficiency, we leaders must establish a standard of military bearing, knowledge and technical prowess that is not easily attained nor easily lost. Tempering these three are other characteristics of patience, understanding and a willingness to help and encourage. I know of no leader or commander from the pages of history who had copious amounts of all these desired traits, but in order for us to attain that degree of leadership we want and need, we all should have at least some of each. Though most of us

Positive direction

are not born leaders, we can magnify our good qualities and minimize our bad ones through frequent association with each other, through monthly NCO-commanding officer meetings, through honest self-criticism, through study of field manuals and military publications and naturally through conscious attempts to better our contact with the troops.

We are cognizant of a few of the many factors which have made our Marine students inattentive, ill-motivated and uninterested. Realizing that plans and techniques are at our disposal to implement training, we have quite a goal for ourselves in efficiently utilizing these in conjunction with our own improvisations for the program. We know, too, that this relies on just how hard we push ourselves as leaders, instructors and examples to the troops.

We have a hard row to hoe in balancing operational requirements with formal training, but we must effect that balance lest the Corps become an organization of underpaid specialists. Again, training cannot be restricted to mean formalized instruction alone but rather is the sum total of all military experience. We Marines have prided ourselves as being the best military organization in the world. Our innovations in the areas of amphibious and infantry warfare have elevated us as experts in the art of war. We have successfully defended our nation through many important national crises: we cannot rest on that reputation of the past. There may come a day in which we'll be called to again take up the cudgel against an enemy. With energetic, dynamic training and positive leadership, the US Marine Corps will tie another streamer on her standard. USMC

SSgt Puckett is presently an aviation ordnanceman with VMA 224. He has been in the Corps since 1950 and during WWII served with the Navy in the ETO. SSgt Puckett holds Good Conduct Medals from both the Navy and Marine Corps His reason for selecting this topic was, "As a former training NCO, I experienced firsthand many impeding influences from apathy, antagonism and lack of co-operation, both in the instructor and the student, and decided to draft an article that would attempt to shed light on a field usually dim."

COL JOHN W. THOMASON, JR.

CHRONICLER OF THE CORPS

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IT IS SHORTLY AFTER 0600 ON AN early autumn morning in our nation's capital, slightly more than a year before the attack on Pearl Harbor. A middle-aged gentleman of average height and of military carriage walks quietly down one of the long corridors on the third deck of the old Navy Department building on Constitution Avenue. For the moment he is relaxed — one hand is thrust inside a pocket of his civilian jacket — the other lightly swings a pair of horn-rimmed spectacles attached to a narrow, black silk ribbon. He is humming softly to himself. Aside from a pair of piercing blue-gray eyes and an almost studied nonchalance his most noticeable features are certain peculiarities of attire. If you looked closely you would see that he is wearing Wellington boots. His civilian hat has a brim just a trifle wider than most easterners affect, and is worn with almost a rakish air.

After unlocking his office door, he hangs his hat on the nearest thing handy, extracts a bundle of dog-eared papers, a writing pad, and a well-worn pencil from his desk, and without wasting further time starts to write. And for the next hour and three-quarters the fingers of his right hand are seldom idle — if he is not writing he is sketching. At precisely 0745 he looks up and acknowledges the approach of his Executive Officer, carrying one or more correspondence baskets overflowing with intelligence dispatches destined for the writer's desk, with a cheery, "Mornin', George," and a perceptible nod to a young lieutenant struggling with the combination of a large office safe.

Back into the drawer goes the manuscript — it will appear in the near future either as a serial in one of the nation's largest and best-known weeklies or will wind up on the editor's desk of a New York publishing firm. And another working day commences for LtCol John W. Thomason, Jr., United States Marine Corps, Chief of the American Republics' Section, Office of the Chief of Naval Intelligence.

What manner of man was this Col Thomason, a combat-worn and campaign-wise Marine awarded the Navy Cross and the Silver Star for great gallantry in France, yet the author and illustrator of no less than 8 books and the editor of still another? How can one best describe this veteran of Marine expeditions from the tropics to the Orient, and at the same time a writer of fiction and historical fact whose articles and short stories replete with the author's drawings and sketches appeared in leading magazines? How can one portray a young Captain of Marines, detachment and landing party commander of the flagship of

the Special Service Squadron, author of *Fix Bayonets?* No less an austere publication than the London *Times* was to comment: "No book which we can recall that has for subject the actual fighting in the Great War, has appeared to us to equal this. The drawings match the prose."

The character of this versatile personage can probably best be discerned by an inspection of his published works wherein the author has portrayed through the medium of fiction his own personal experiences. As Thomason once wrote: "Fiction must be probable. History can be, and frequently is, well over the incredible side." In his so-called fictional tales the Colonel was "there" in the literal sense of the word. The majority of the place names he uses are true locations, many of his characters then-living persons with their actual names. Thomason's fiction is no mere second-hand accounting of the adventures of others. On the contrary, he was an on-the-spot reporter and artist and he wrote and he sketched what he saw there and then. And on those infrequent occasions when he relates another's story, he so informs his readers.

In his historical writings as in his fiction realism is equally dominant. His accuracy as an historian is unquestioned—Thomason's *Jeb Stuart* is considered "one of the most authoritative historical biographies of the Civil War." The campaigns he relates in *Lone Star Preacher* are true and accurate accounts, and although the hero, The Reverend Praxiteles Swan, is portrayed a fictitious character, in the author's words Elder Swan "did in every aspect exist, and move, and have his being in the southern regions of these United States, within the memory of living men."

Thomason's sense of realism in all his published works, fictional as well as historical, owes much to the author's deep concern with his fellow men. He was well aware of the fact that wars are waged and campaigns conducted by human beings — that the human factor in time of stress has a priority over considerations pertaining to weapons or to tactics. Whereas warfare may be viewed dispassionately by the professional historian or the statistician, to Thomason's characters, the men on the receiving end of the enemy's steel, the matter of life and sudden death becomes a most personal matter. This applies not only to Thomason's front-line soldiers of the Civil War campaigns and to his Marine riflemen in France, but also to the Marine on patrol in the tropics and to a Chinese bandit about to lose his head. It is also evident throughout the Colonel's tales that equal consideration has been accorded the lone man in barracks, the sentry at the Main Gate, and the lad on the firing range — the feelings of each individual are masterfully portrayed by this student of humanity.

By Col Roger Willock

Thomason's realism is achieved without resort to vulgarity, to the snide innuendo, or to the unpleasant insinuation. Admittedly his characters are not "plaster saints," but hard language is kept to a minimum, there are no obsenities, and if a man does not measure up to the expected standards of conduct we are informed the reasons why plainly and succinctly. The author does not feel called upon to snipe at recognized authority nor to criticize the opinions and actions of those higher in authority who bear responsibility. And all of this is a pleasantly refreshing change from the tactics employed by other lesser-gifted writers in their fictional accounts of later-day campaigns.

John Thomason above all else was "an Officer and a Gentleman." His military record was no less brilliant than his personal reputation. Like many of the characters in his published works he was an idealist — the Marine Corps to him was a "way of life." Things were right or things were wrong — there were no "in betweens," "almosts," or "maybe's." There was one way to do things — the Regulation Way — and excuses were neither desired nor accepted. Tolerance was granted only to the extent that the letter of the law could be modified in favor of the spirit — under certain conditions. For the Colonel was an exponent of plain, common horse-sense and he was never above lending a sympathetic ear — if the circumstances in his opinion merited his consideration. Those who served under him knew exactly where they stood in their superior's estimation. And when Thomason was to state, "I desire," there was no doubt in anyone's mind as to just what the Colonel wished — results were immediately achieved — or else.

It is true that Thomason, like many of his characters, affected certain distinctive, personal mannerisms, but there were no violations of Regulations. In the matter of his uniforms his breeches were always cut with a certain flare to their appearance, and he took great pride in the maintenance of his belt and his boots. There was a distinctive way in which he talked — he had his own brand of soft-spoken Southern accent. A born raconteur, he liked "a good story," and what was equally important — he was a good listener.

A simple accounting of Thomason's purely military career will not suffice to give a thoroughly-rounded picture of this outstanding Marine officer. Although but 51 years of age at the time of his death in 1944, of which he had devoted no less than 27 to his career as a Marine, his background and his youth played a prominent role in the shaping of his personality. Thomason was born in Huntsville, Texas on 28 February 1893. Both his father and grandfather were physicians by profession. At least one uncle as well as Thomason's grandfather were Confederate

veterans; the latter, incidentally, served as Gen Longstreet's Chief of Staff during the Gettysburg campaign. Thomason was frank to admit that much of his youth was spent in the presence of many an old-timer of Hood's Texas Brigade, Confederate States Provisional Army, and from certain of those aging veterans, particularly at conventions around the turn of the century which he attended with his father, he picked up an amazing number of tales and anecdotes which he was years later to incorporate into his published works pertaining to the Civil War.

To use Thomason's own words, his formal education "was picked up kind of on the run"—he attended in succession the Southwestern University of Texas, the Sam Houston Normal Institute at Huntsville and the University of Texas at Austin during the period 1909-13. It is interesting to note here that the first-mentioned seat of learning awarded him the honorary degree of Doctor of Literature in 1938—after he had received national literary recognition; moreover, somewhere along the line in later years the Colonel was made an honorary member of Phi Beta Kappa fraternity. Being of an artistic temperament, he journeyed to New York City in 1913, and for the next 2 years attended the Art Students League in Manhattan. Of this period, Thomason was to remark, "This was my one and only fling with the Bohemian group."

In 1916, he returned to Texas to try his hand at journalism, and until April 1917 served as a reporter on the *Houston Chronicle*. Following the United States' declaration of

war against Germany, Thomason secured a commission as a second lieutenant, United States Marine Corps—he was appointed 6 August 1917 with date of rank 8 June 1917. He initially trained with the 1st Bn, 5th Marines at Quantico, and before the departure of his unit for France for service with the American Expeditionary Force not only received a temporary promotion to the rank of first lieutenant, but also was married on 27 August 1917 in Washington to Leda Bass of Terrell, Texas.

During the period November 1917 to July 1919 he served with the 49th Co, 1st Bn, 5th Marines as a platoon leader and acting company commander (on 1 July 1918, he received temporary promotion to the rank of Captain). Along with other units of the 4th Marine Brigade, 2d Div, AEF, Thomason participated at Belleau Wood, Chateau-Thierry, Soissons, Champagne, St. Mihiel and the Meuse-Argonne. His war record was outstanding—witness his award of 2 decorations. He received the Navy Cross for heroism at Soissons (July 1918) on which occasion Thomason along with another Marine wiped out a German machine gun nest. His experiences in France afforded the background for *Fix Bayonets* and at least one or more chapters for *Red Pants* and *Marines and Others*, published almost a decade later (1926, 1927 and 1929 respectively).

Returning to the United States in November 1919, Thomason elected to make a career of the Marine Corps. In January 1920 he was sent to Camaguey, Cuba and served in that Republic until September 1921. He was appointed a permanent Captain in April 1921 while on foreign service. On his return to the United States he was on duty at the Marine Barracks, Naval Operating Base, Hampton Roads, Virginia (1922) and from November 1923 until April 1925 was Commanding Officer, Marine Barracks, Naval Ammunition Deport at Dover, New Jersey.

On 10 April 1925, Thomason was designated Commanding Officer of the Marine Detachment of the USS *Rochester*, flagship of the Special Service Squadron based at Balboa, Canal Zone. His varied service aboard this cruiser, which operated not only in the Caribbean Sea but also in the Pacific from the Mexican Border south to Cape Horn, provided him with the material later incorporated into *Marines and Others*. This tour of duty which lasted until February 1927 was doubtless one of the most interesting of his entire career. As "Skipper" of a seagoing detachment of Marines he had ample opportunity to command and to observe a compact, professionally-proud group of men in the days when a Captain of Marines, assisted by his First Sergeant, really "ran" a company.

The ensuing 3 years (1927-30) saw Thomason on duty at Headquarters, US Marine Corps, in the Office of the Commandant. During this interlude he conducted the formidable

research which culminated with the publication of his widely-heralded *Jeb Stuart* (1930). Perhaps the best summation of this volume is contained in the Foreword wherein Thomason stated: "What I have attempted is not a history of a war, but a portrait of a splendid human soul, expressed through the profession of arms."

In September 1930 he joined the Marine Detachment, American Legation at Peiping, China. His 3-year tour of duty in the Orient was somewhat enlivened by additional duty as an observer with the Chinese Armies in their futile efforts to resist the Japanese invasion of Jehol Province. In any event he brought forth a new book, *Salt Winds and Gobi Dust* (1934), a product of his duty with the Legation Guard, shortly after his return to Washington.

In May 1934, after some 14 years in grade, Capt Thomason was promoted to the rank of major, and in that capacity served as a Marine Corps aide to the Assistant Secretary of the Navy. His next literary work was *The Adventures of General Marbot* (1935), a tale of the Napoleonic Campaigns, which he edited and illustrated, followed by publication of *Gone to Texas* (1937), a romantic novel of that state during the period of Yankee reconstruction. Following promotion to lieutenant colonel in 1937, Thomason attended the Army War College at Fort Humphreys and later the Navy War College at Newport. In June 1938 he was transferred to San Diego and served as a battalion commander of the 6th Marines until assigned to the Office of Naval Intelligence at Washington during the month of June 1940.

By this date his many and varied talents as an author and illustrator were well-known. Aside from contributing regularly to such reputable magazines as *The Saturday Evening Post*, he was to continue his research endeavors. In 1941 he produced the outstanding *Lone Star Preacher*, which can probably best be described by its sub title, "being a Chronicle of the Acts of Praxiteles Swan, M.E. Church South, sometime Captain, 5th Texas Regiment, Confederate States Provisional Army."

This book along with his *Jeb Stuart* published a decade earlier further enhanced Thomason's reputation as a writer and illustrator of higher caliber.

Pearl Harbor almost brought an end to his writing. In the winter of 1941-42, Thomason, now a colonel, toured the length and breadth of Latin America inspecting various Naval Attache posts. Whenever possible during flights he continued to make notes and to draw sketches of what he had observed. At least two short stories based on this 3-month tour were to appear in his final publication, —*And a Few Marines*. Early in 1943 he finally secured a transfer from Washington to San Diego; however, his untimely death in March 1944 denied him the opportunity of serving in action overseas with the Marine Corps during the Second World War.

This versatile and unique combination of a professional Marine, author and artist, this man of the ever alert mind and the ever busy hands, through the medium of his published works has truly left us a wealth of information and entertainment. To all intents and purposes he was the "Unofficial Chronicler" of our Corps. But he never forgot that first and foremost he was a Marine, and it may be said that there are yet today many members of our Corps who are perhaps better Marines for having served under Col John W. Thomason, Jr. USMC

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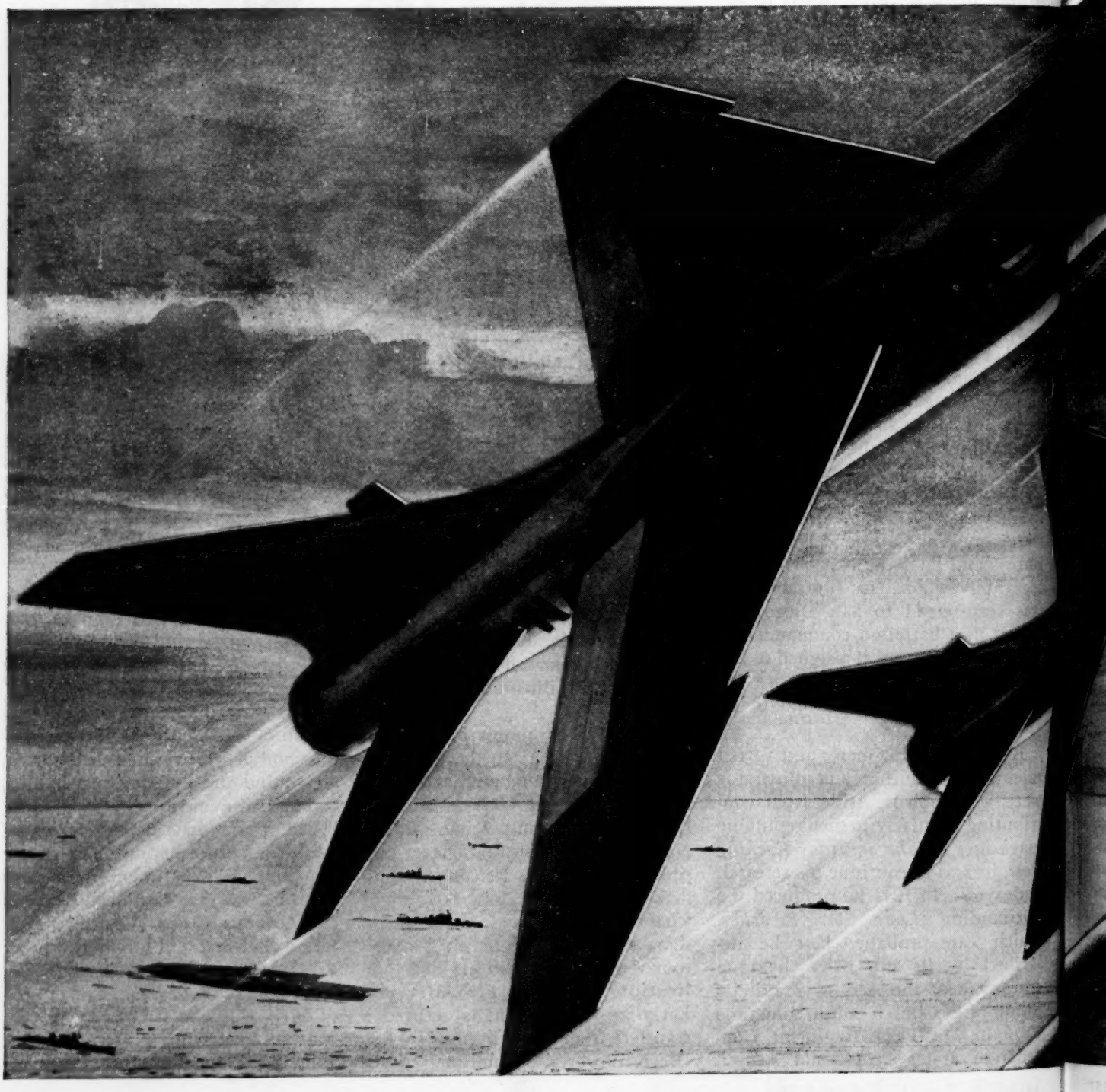

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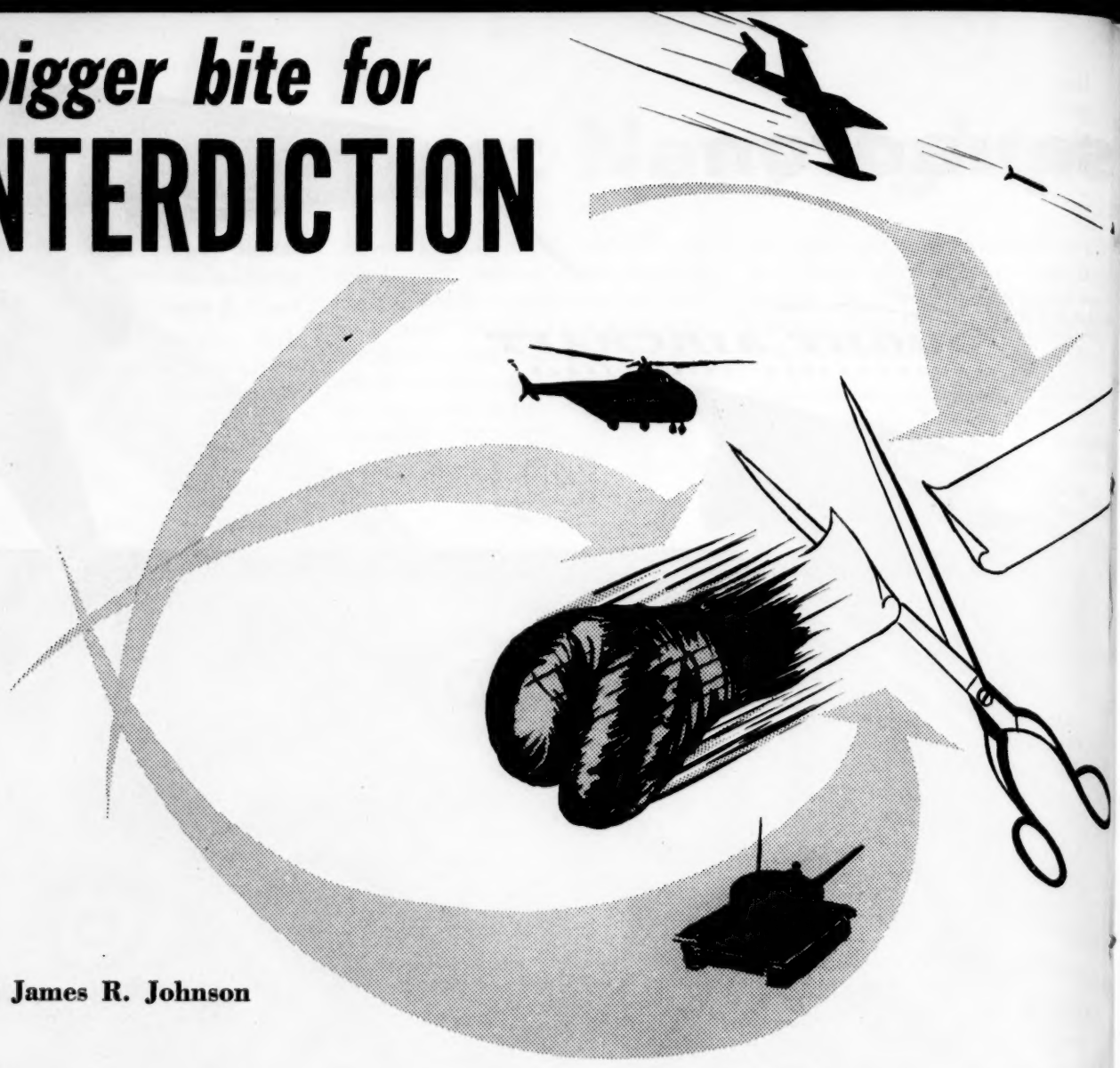


By Maj James R. Johnson

Modern arms have replaced the cavalry—but the requirement for their mission still exists

SHERMAN, OF "MARCHING-Through-Georgia" fame, hit it when he remarked that the only way to interrupt a supply line was to plant an army across it.

During the 1864 campaign before Atlanta he sent his cavalry raiding south of the city to destroy the railroad which pumped life blood into stubborn Confederate defenders. The day after the raiders returned from "destroying" miles of track, his scouts reported trains running south again from Atlanta on schedule.

Interdiction had the same meaning in the American Civil War as in Korea — to stop or hinder a hostile's use of an area or route. There have been many innovations attempting to do a better job of it, principally by trying to make destruction last longer so that the route or area stays out of use longer.

A unique Civil War effort was the Andrews raid when a group of disguised Federals stole a Southern train between Atlanta and Chattanooga, hoping to do enough damage to the track between those cities to cause apprehensive Confederates to fall back on Atlanta and leave Chattanooga open for effortless occupation. The "great locomotive chase," as it came to be called, was a colorful incident which made good copy in 1862 newspapers. As a military effort it was a flop, even in conception since nothing would prevent the Southerners from getting right to work with reconstruction.

A year later the Federals aimed at the same general target by sweeping a 1,500-man cavalry force around the south flank of Confederates defending middle Tennessee. This force, under Col A. D. Streight, had objectives of burning the rail bridge across the Etowah between Atlanta and Chattanooga, and destroying Rome's arsenals. Streight's force was captured before it got to Georgia. The unfortunate thing was that the raid was like that of Andrews'. It could not have been successful interdiction if it had reached its targets. Since there was no plan for occupying the targets, a construction force would have rebuilt the Etowah bridge in a few days.

There were many such raids during this first big war in which participants fought so hard for railroads and supply lines. The Confederates, with John Hunt Morgan, Nathan Bedford Forrest, John Mosby, Joe Wheeler and a dozen other bold cavalry raiders, were especially proficient in the art of behind-the-lines destruction of main supply routes.

But the Federals, with a well organized engineer effort, were so proficient in reconstruction of supply

line breaks that a Southern joke soon had it that blowing bridges and railroad tunnels was of no use since the Yanks carried spares along with them. This was not far from fact. As the Federal Army of the Potomac moved toward Richmond, engineer chief Herman Haupt prefabricated 60-foot sections of wooden trusses called shadbellies and placed them aboard flatcars at strategic points. He could lay a bridge about as fast as a dog trots according to Secretary Chase. And there was no dependence on hard-to-get steel beams. The bridge "makings" were always on hand.

Certainly their reconstruction of bridges and track was as fast as that of 1952 North Koreans who followed Haupt's example and replaced trestles within a few hours after an air raid.

In effect, the World War and Korean air raids were a modern way of doing the interdiction job the horse cavalry once did. In some cases they were not as effective since cavalry raiders physically visited the target to destroy with their hands. Despite all the effort behind Korea's air interdiction program, North Korean supply lines were seldom out for any desirable length of time, and air interdiction never completely stopped traffic on a main supply route.

When working against the MSRs of 90 years ago, those cavalry raiders who did the most effective job would sit on a target until forced away by mounting enemy pressure. Perhaps the closest to Sherman's desire of sitting on a supply line in modern wars was demonstrated along Korea's east coast when naval gunfire methodically destroyed rail trestles and road bridges and triggered road-covering landslides in the cliffs without fear of effective enemy interference.

This situation approached the ideal for interdiction since the enemy could conduct only small scale activity on the supply lines at night or during periods of poor visibility.

What method of inland interdiction can be devised with our present forces of the Fleet Marine Force to put more bite into an interdiction program? Do we have a method of planting a force on an enemy MSR for the time necessary to efficiently destroy trestles and bridges and rails — and to occupy these key points to deny enemy repair effort or use, even by foot traffic, during critical periods of a campaign?

Yes, we've got such a line-cutting capability right now — one that can easily be tailored to any interdiction situation. It's a capability which has existed for several years, and is nothing new. Interdiction is an ideal assignment for this capability and Korea's jagged surface would have been ideal terrain in which to employ it.

This is the helicopter-lifted infantry unit—supported by air tactically and logistically—an infantry force reinforced by detachments of engineers, 105mm howitzers, a tactical air control party, and possibly, countermortar personnel and their equipment.

The first apparent objection is that such a force violates the fundamental principle of war — mass. It allows a small force to be placed in enemy territory beyond supporting distance where it can be overwhelmed.

If the enemy's capability for moving sizable forces quickly is great, we do violate our effective use of mass. But if we use such task forces in situations where we control the skies over the target for the required time, the task force has greater combat power, or mass, than the enemy in the vicinity. The farther behind hostile lines we reach, the less we are apt to encounter a capability for quick concentration. (Most of the time we'll have to be far enough behind the hostile lines so the hostile artillery cannot be turned around on us from the front line area — at least 20 miles in a permanent front line situation.)

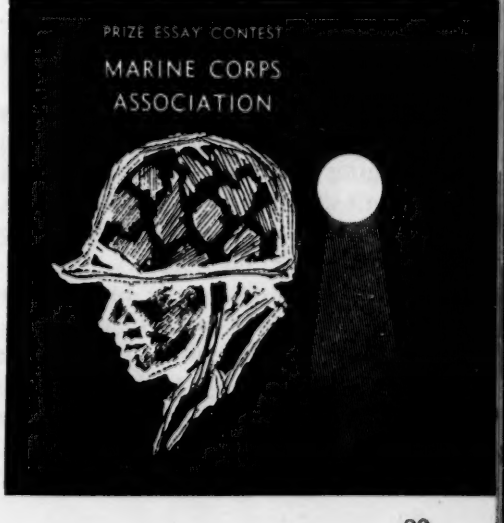
How long must such a force sit on the enemy's supply line? Until it completes a methodical job of destruction; until attached engineers blow all selected targets; until delayed-action mines have been carefully laid and camouflaged to discourage repair crews; until supported friendly schemes of maneuver have been accomplished as planned, and until the enemy has brought artillery close enough to threaten the position. Then it is time for the task force to be picked up and brought home.

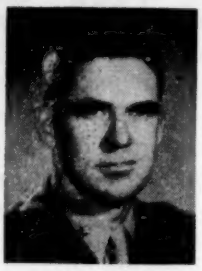
What does such a force accomplish that aerial strikes cannot? Primarily, a methodical job of destruction, plus a defense of the area to stop all traffic, including walking men, and to prevent repair for a desired time.

We mentioned that Civil War cavalry on many occasions did a better job of taking out a railroad than today's bombers. When there was time for a short occupation of their target, cavalry raiders put out pickets and patrols, and set to work making huge bonfires of rail ties. Rails were laid thereon and allowed to become red hot in the middle. Details then took hold of tips and bent each around a tree to form an outsized horseshoe. Such rails could not be straightened by any methods short of machinery.

Are there examples of similar interdiction task forces and missions against modern weapons and forces? The Germans opened their WWII attack on Holland by parachuting a company on each of 2 key canal bridges in hostile territory. The Russian guerrilla, or partisan bands, of WWII, which were operating in territory with friendly inhabitants, were effective in interdicting German supply routes. Many such units were supplied by air. Allied paratroops of WWII continually performed such missions. British commando and TTU Pacific reconnaissance units landed on east-coast Korea for like interdiction raids (although without occupation for any length of time). In recent months Vieques training maneuvers have used armored task forces of similar composition (but with the addition of tanks) as suggested to occupy selected targets and accomplish thor-

HONORABLE MENTION GROUP I





Maj Johnson has served in both ground and air elements of the FMF. During WW II he was with the 5th Mar Div. Recalled from a Reserve squadron in 1950, he has been with the 1st and 2d MAWs since then, attended Junior School and completed a tour with the 2d Mar Div. Now an NROTC instructor at Univ of Louisville, his reason for entering the Prize Essay contest was, " . . . have thought about this for some time; believe that there is much to be done to improve interdiction; appreciate very much the chance to air my opinions on the subject."

ough destruction with their engineer detachments.

Is such a task force a glorified road block? Yes, it is, just as was the USS *Missouri's* shelling of Wonsan's main streets.

What is the key factor in launching such a task force? Assuming air superiority has been established, weather is the key. A long-range forecast must show enough good weather to do the job and allow helicopters to get in and lift out the force. (And this exit is at 120 knots in the HR2S.) Weather must permit effective air cover over the target and avenues of approach. Well-trained, close-support airmen are indispensable to such an operation.

Most of the work of covering this force will have to be done by aircraft flying a 24-hour cover. Night cover would utilize flare drops as necessary, and MPQ bombing in "unscheduled" bad weather and darkness could limit the hostile capability for concentrating during reduced visibility.

But what of this argument: If we cannot depend on aerial strikes accomplishing interdiction missions to our satisfaction in the first place, how can we expect them to do it for our helicopter task force? We cannot. We do expect aerial interdiction to hinder the enemy's concentration only as visibility for attacking pilots allows, and only in inverse proportion to the hostile's energy in bringing combat power to bear against our task force. In any event, before the enemy is ready to lower the boom, we must leave.

Why couldn't hostile forces erase the force with a small-yield nuclear weapon? They could, but hostile forces are not as apt to utilize one in their own territory among their own inhabitants and on their own MSR, as elsewhere.

Let's check the important components of our helicopter-lifted task force. We can use the HRS helicopter and substitute 75mm pack howitzers for our 105s in an emergency, but let's plan in terms of the HR2S with an easy 50-mile operating radius and ability to carry over 3 tons or nearly 30 combat-equipped men. We must have a body of infantry, usually a company, to occupy and defend the terrain (in most instances the high ground) in and around the target while our engineers work. We will need a platoon of engineers heavy on demolitions and mines to destroy the trestles, tunnels, bridges, track or whatever target has been assigned. We will need a battery (usually less) of 105 howitzers (tomorrow we can use jeep-mounted 106 recoilless guns instead) to hold the approaching hostile forces at arm's length. A counter-mortar radar section and a tactical air control party will help select targets for our howitzers and air. A section of 75mm recoilless will reinforce our antitank capability, although we may decide to use only 3.5 rocket launchers. We'll need to take extra communication gear if we're at a distance. These elements will probably meet most needs, but we'll have to build each task force for each target and enemy capability.

Let's look at a "what-might-have-been" operation and "overlay" our proposed interdiction forces on a recent historical example of a large-scale interdiction effort which fulfilled its mission very successfully — the Inchon landing.

Reduced to a simple statement of their mission, the Inchon planners were to plant an occupation force on the MSR through Seoul, the one that supplied most hostiles in southern Korea, while the Eighth Army broke out of the Pusan perimeter. MacArthur had said, "Everything the enemy shoots, and all the additional replenishment he needs, have to come through Seoul. We are going to try to seize that distributing area."

The amphibious force landing at Inchon on 15 September 1950 would have 22 miles to go to secure their ultimate objective, the Seoul area. And they would take a calculated risk in throwing forward their main force of 2 regiments against the target before the North Koreans could concentrate.

Now let's see if we could have reduced that risk with our proposed interdiction forces.

Intelligence for the operation was unusually accurate — very nearly naming the North Koreans defending Seoul. With this very necessary situation present, let us place on the map our helicopter-lifted road blocks and assign them missions.

The flanks of the route to Seoul from the beachhead are wide open, subject only to what we can secure with naval gunfire and air. To the south to block garrison forces moving by rail and road to Seoul, we'll place a task force astride the valley at the point where the road and rail intersect (about 2 miles north of Suwon and 5 miles south of Yongdongpo). Aerial photography shows a sizeable amount of NK tanks and vehicles south of that point, so we'll have to increase our antitank capability (more rockets launchers and mines and our air cover will be heavy on AT aerial rockets).

This task force will be about 21 miles from the beachhead and they will set down at the Inchon L-hour of 0630 when the offshore islands are assaulted. If we wait until the Inchon H-hour of 1730 there won't be time to set up defenses before dark. This force must do most of its destructive work on the railroad and do most of its mine-planting during D-day for if the North Koreans show an unusual ability to concentrate here, the force must be ready for evacuation on D plus 1. With good weather, our air cover should allow the task force to spend 2 or 3 days here, then when the enemy builds up to attack (at this point instead of against our main force on the Inchon-Seoul road) we'll pull out our

force. In any event we've gained time for our main force to get well on the way to Seoul and we've destroyed and mined a healthy portion of his rails and roadbeds in the area.

To the north (left) flank of our advance inland we plant another interdiction force on Kimpo airfield. (A commando-type raid against Kimpo immediately after landing was originally considered in the planning.) There are about 500 effective hostiles of the 107th Security Regiment at Kimpo, but we can expect to erase much potential resistance with a preliminary air bombardment and the shock of putting a balanced fighting force in their midst. This force is heavy on automatic weapons and rocket launchers, and its mission is to hold the field until the arrival of the 5th Marines. H-hour here is the same — 0630 of D-day.

To the front of our main force we plant a task force on Hill 123 overlooking Sosa village from the northeast. This little communications hub 3 miles east of Ascom City can be well covered by mortars and artillery on 123. (Another idea thrown in the Inchon planning pot was the possibility of throwing out an armored-infantry force built around a 32d Army Infantry battalion for immediate seizure of high ground overlooking Seoul. Although failing to materialize, primarily because of logistical limitations, this interdiction force would have had the same job, although much closer to Seoul.)

Our task force here would need to be heavy on artillery and automatic weapons for at Yongdongpo are 2,000 hostiles of the NK 9th Rifle Div and across the river in the Seoul area up to 6,500 assorted enemy, although the latter have a limited capability for crossing the Han to reinforce the Yongdongpo garrison. H-hour is the same—0630. If scarcity of helicopters dictates, we'll put our Kimpo force in first, then Sosa and Suwon.

Let's take a closer look at the Sosa force and set up a probable schedule of events.

0530: Combat air patrols take station over target. A 4-plane flight begins search-and-attack missions along routes leading to target. This flight takes station for on-call missions as soon as tactical air control party makes contact. Relieve on station every 2 hours.

0625: Smoke runs on objective, continuing as necessary.

0630: First helicopter wave lands. Contains infantry, pathfinder personnel and assistant helicopter co-ordinator.

0634: Second wave lands. Contains infantry, artillery reconnaissance personnel and tactical air control party. Succeeding waves bring in all infantry, artillery and engineers in that order. Logistical lift begins immediately upon completion of tactical lift.

Twilight minus 30 minutes: Additional 4-plane flight makes search-and-attack runs on possible avenues of approach and enemy assembly areas.

Twilight: Night-attack flight equipped for flare drops replaces day cover. NiteCAPs replace DayCAPs if this mission has not been taken over by Combat Air Patrols screening a larger area.

First light: Day cover 4-plane flight makes hasty surveillance of avenues of approach and possible assembly areas before relieving night-attack flight.

If withdrawal becomes necessary, units are lifted out in inverse order to that landed. Should heavy enemy action dictate, two 4-plane on-call flights operate in sectors to either side of target. Their ordnance load is heavy on VT-fuzed general purpose bombs and rockets to keep enemy gun crews off their weapons. Tactical air co-ordinator (airborne) assists directing strikes and smoke runs as necessary. Combat Air Patrols cover target and outgoing helicopter flights.

Now let's take a final look at our proposed interdiction force and measure it against a proper yardstick for any military decision, that is, application of the principles of war.

Do we have *Surprise?* Yes, we pick target and time. Do we have *Security?* Yes, if we've covered ourselves with air; built ourselves a balanced force and provided for a foolproof return lift. What about *Co-operation?* Any task organization must have this. Since our force leans heavily on air for security, co-ordination with this arm must be near perfect.

Do we have *Movement?* There is no doubt about it. (Napoleon and Stonewall Jackson were great for this principle of war, would have given their right arms for 120-knot helicopters.)

Have we properly applied the principle of *Objective?* Yes, our objective is sound — we reduce the enemy's capability to fight. Do we have *Economy?* We have not wasted effort or material. We can't afford to in a helicopter lift. The principle of *Offensive* is certainly present, since we're initiating the action, not the enemy. We have not violated the principle of *Simplicity* in concept, for we simply move to our objective and put our force to work. Modern wars and weapons cause us to complicate our fighting, but our force is no more complicated than conventional military organizations. It is a simple vertical envelopment and withdrawal (if the latter becomes necessary).

What about the most important principle, the one which encompasses all the others — *Mass?* We control the target area with our combat power. If we cannot, we reject the target, and when our control of a target is threatened, we break off the fighting and go home.

We have satisfied Sherman's requirement for occupying and destroying, even if we don't cut a 60-mile wide swath through Georgia. And we can build such a force this afternoon, if necessary. USMC

"Cavalry of the Sky"

MARINE AIR(RA

The new-look is now emerging in th Marine Corps air arm to keep pace wit the tasks required in modern warfare Fleet Marine Force aviation now em ploys the best of all aircraft in Nava Aviation. Available to the landing forc for the air defense tasks we now find th FJ-4 *Fury* and the F4D-1 *Skyray;* soo the world's fastest carrier plane, th F8U-1 *Crusader,* will join this family o fighter aircraft. Carrying the most effec tive air-to-air missiles, the Sparrow an Sidewinder, is the F3D *Skyknight* in th night-fighter task. Backing this are th Fleet Marine Force Terrier Battalion with their surface-to-air missiles.

In the close air support field, attac squadrons are being equipped with th

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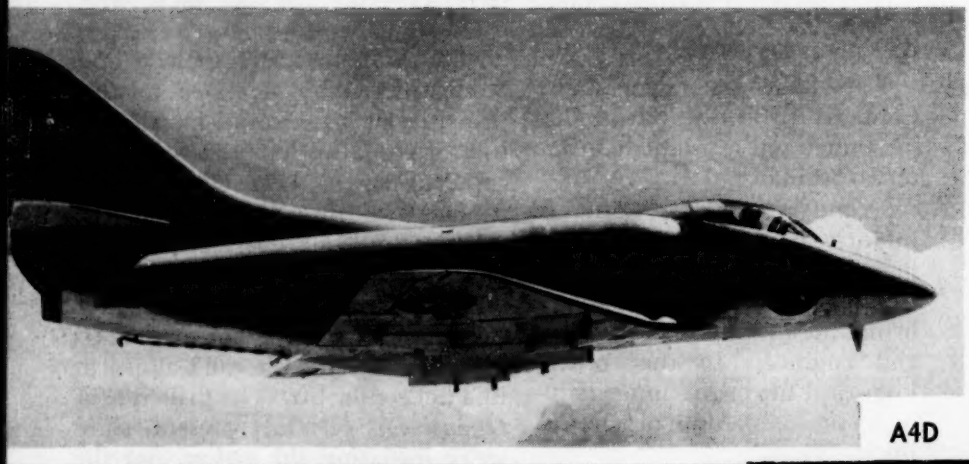

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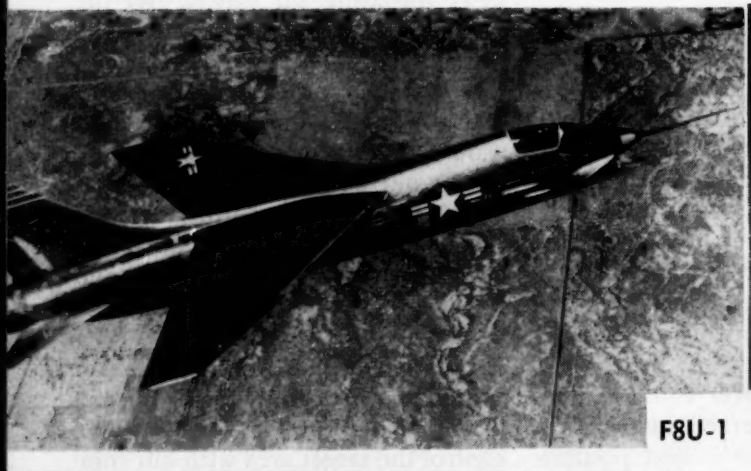

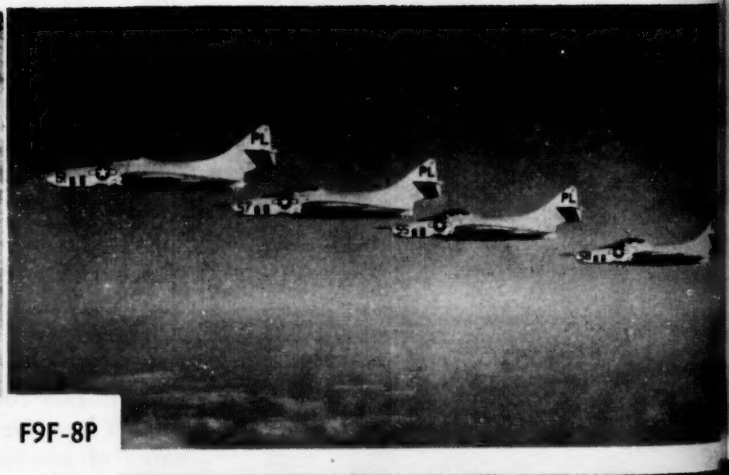

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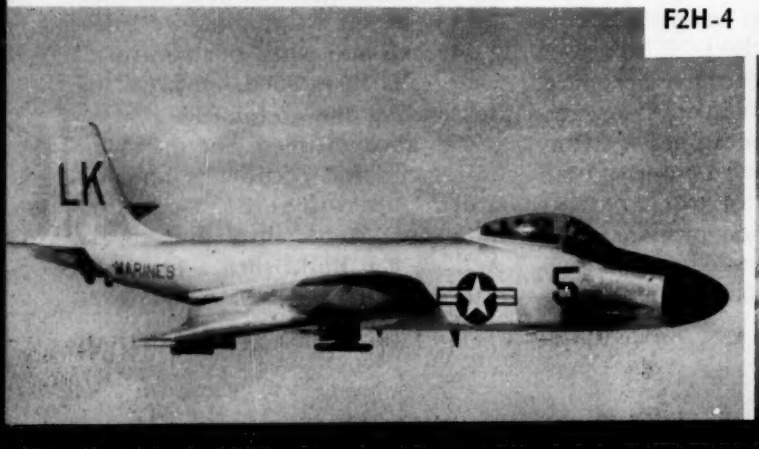


RAFT TODAY

A4D *Skyhawk* to add to the current F2H-4 *Banshee* capability. These aircraft deliver all modern ammunition — conventional or nuclear.

Reconnaissance tasks are provided for in the F9F-8P *Cougar*, and the F3D-2Q. Observation and reconnaissance for assault elements falls on the current OE-2 and HOK equipped squadrons.

Rotary wing assault aircraft are expanding from the HRS to include the HUS and the HR2S. Fixed wing assault support aircraft will include the R4Q, long with the Fleet Marine Force, and the new turboprop C-130A *Hercules*.

There are many aircraft that bear the word MARINES, but these are the modern tools for tomorrow's job today.

F4D-1

F3D

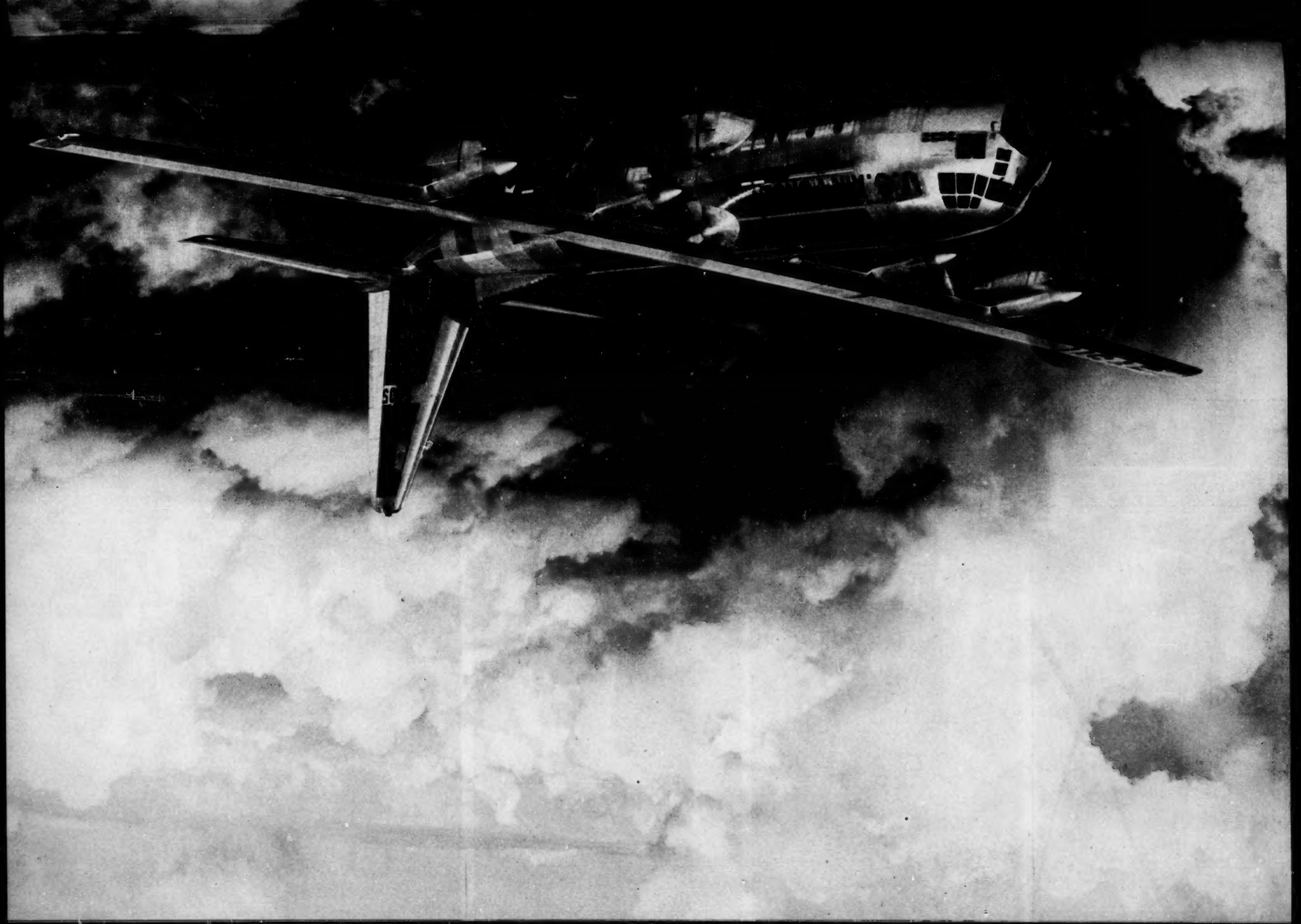
HR2S

OE-2

HUS

C-130A

HOK



VERSATILE NEW "STRONGMAN" OF U. S. ARMED FORCES, THE C-130 HERCULES IS SIX PLANES IN ONE: PUSH-BUTTON CARGO DROPPER, 92-MAN TROOPSHIP, 20-TON CARGO HAULER, PARATROOP ASSAULT PLANE, FLYING HOSPITAL & AERIAL TANKER. BUILT BY LOCKHEED.

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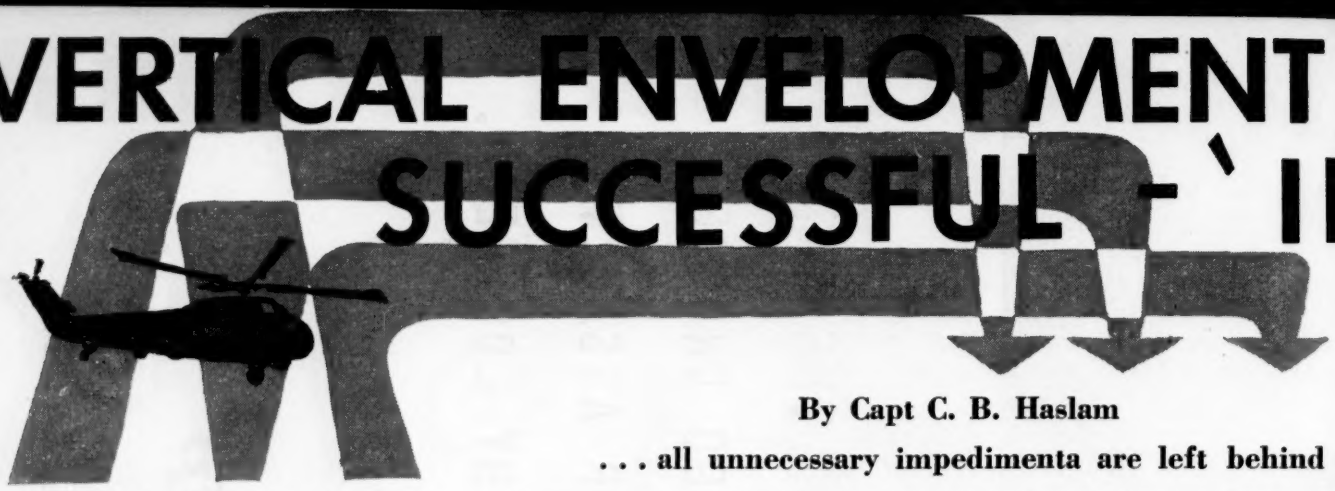
LOCKHEED *means leadership*

LOCKHEED GEORGIA DIVISION: *(U.S. Air Force Plant No. 6, Marietta, and Georgia Nuclear Aircraft Laboratory, Dawsonville)* PROPJET C-130 HERCULES COMBAT CARGO CARRIER • B-47 MODERNIZATION • NUCLEAR-POWERED AIRCRAFT RESEARCH & DEVELOPMENT

VERTICAL ENVELOPMENT - SUCCESSFUL - 'IF'



By Capt C. B. Haslam

. . . all unnecessary impedimenta are left behind

THE MARINE CORPS IS PRESENTLY adjusting itself to conform with adoption of the new concept of Vertical Envelopment. The move toward the fulfilment of this goal will have a tremendous effect upon future warfare; not only tactically but logistically as well.

In past amphibious operations the Marine Corps necessarily relied heavily upon the "sea train" which transported astronomical amounts of equipment to support assigned missions. This "sea train" carried just about anything and everything into the zone of action; the wide variety being attributed, in a large degree, to the well established principle that a Marine should not leave anything behind. Such a characteristic is understandable and cannot be condemned when considering the large amount of shipping usually available for support of Marine operations. Unlimited shipping has always been a convenient out for the Marine Corps since weight factors, to a great extent, could almost be ignored.

Reliance upon the "sea train" to transport nonessentials as well as essentials, although quite understandable in the past, is now having a detrimental effect upon the Marine Corps' conversion to the new and different type vehicle for movement and supply: the helicopter. In the past the desire to retain all types of items has given rise to the all unfortunate expression of "it sure would be nice to have." However, with the coming of the Helicopter Landing Force, cargo space for the new vehicle of movement and supply will be at a premium. As a result, the often referred to phrase must be discarded. Unfortunately for the Marine Corps, the expression under discussion has already crept into the planning for the development of necessary materiel to support this new doctrine and, if permitted to go unchecked, could result in a condition adversely affecting the chances of making the new concept workable.

The concept of Vertical Envelopment is *sound* and can be made to work; *provided* the Marine Corps alters its thinking and takes a realistic approach toward the development of items supporting the doctrine. We all agree, without the necessary supporting items, the new concept could well fall by the wayside.

During the search for the necessary equipment to round out the new concept, the Marine Corps is applying a rule of thumb in order to decide whether some of the present, as well as future, items are compatible or incompatible with the desired goal; that is, do the items on hand or under development support the new concept? Unfortunately this rule of thumb appears to be nothing more than a weight factor. If the items being judged are light enough to be helicopter transportable they are considered compatible with the new doctrine; if not, they become incompatible. Some of the new weapons being developed support the new concept primarily because they fall into one of two categories; namely,

a) Can be transported by helicopter

b) "Sure nice to have"

Apparently little or no consideration was or is being given to such important factors as: "Is there a definite need for the item?" and "Does it render effects duplicating a weapon on hand compatible with the Vertical Envelopment without offering superior performance?" In as much as the adoption of the new doctrine revolutionizes the tactical employment of troops and weapons, it is obvious that the Marine Corps must gear its weapons requirements to meet this tactical change. To insure the success of the Vertical Envelopment it is imperative that a review be made of "present policy" and the answers obtained to the two questions set forth above. If the answer is *No* to the first question and *Yes* to the second then the requirement for the item should be cancelled. What are some of these weapons that might be considered incompatible with the doctrine of Vertical Envelopment? First there is –

FLAME

The Marine Corps is interested and supporting the development of a one-shot flamethrower. Briefly, this weapon loaded weighs about 25 lbs. and will retain and expel considerably less fuel than that of the standard M2A1 flamethrower. The duration of fire for this new flame weapon will be 3 seconds at which time all of its fuel will have been expended. A distinct innovation in respect to this item is that it can be fired by *remote control* as well as manually. It is an expendable-type item but it is also designed to be recharged if necessary. The fallacy of such a weapon lies in the fact that all of its fuel can be expended in 3 seconds. To explain this undesirable characteristic I would like to mention the fact that it requires an experienced flamethrower man, armed with the present flamethrower with its larger fuel evacuation of 3¾ gallons and a duration of fire up to 9 seconds, a total of at least 4 seconds to accurately direct flame to a 20-inch target located 45 to 50 yards distant. This is from a flamethrower which expels close to 4 gallons of fuel and has 3 times the duration of fire than than of the item under development. The point to be made

here is how does one expect to accomplish in 3 seconds what it takes at least 4 seconds to do? The suggested answer to this question is "Training." Unfortunately, however, training cannot compensate to permit consistent target hits at 45 yards within 3 seconds; otherwise the present flamethrower capably manned could accomplish the same.

What requirement is there for such an item? The new multi-shot portable flamethrower weighing 50 lbs., loaded with 4 gallons of fuel and gun, is the logical weapon to support the new concept since the flamethrower man has something to support it with; namely, greater duration of fire and 4 gallons of fuel. Such assets as these greatly enhance his chances of saturating the target. Also, we must take time to consider the item being developed poorly duplicates the performance of the multi-shot flamethrower under development for reasons stated above.

Another important question is, "Who would man such an item?" We cannot expect to give it to the rifleman or can we? If not then we must be contemplating expanding our assault elements to provide for additional personnel to man such a device. But this would hardly be worthwhile since the manpower and the weapons utilized would contribute nothing to an assigned mission and under the new doctrine *every man and weapon must serve a useful and constructive purpose.*

What situation would demand portable flamethrowers to be fired by remote control? I am afraid that here we are looking at another weapon "that sure would be nice to have."

The Marine Corps is also seeking an entirely different sort of a flame weapon. It is referred to as a long-range flame projector. The purpose of this item, it has been said, is to give target effects "equal to" or better than that of a fire bomb in order to provide for close support of combat operations. This device would project a container of napalm to ranges over 1,800 yards. What requirement is there for this item? Light mortars have a range over 1,800 yards with ammunition designed for use against personnel. Also, there are machine guns to cover portions of this gap. In addition, has the Marine Corps lost sight of the satisfactory performance of its "well proven close support aircraft" for such missions as this? Close air support in the Marine Corps has always performed admirably in past operations and there is no reason to believe that it cannot do so again under the new concept.

Who would man these weapons? Once again I cannot see how they could fit into existing elements unless we contemplate expanding these units to provide additional personnel. However, this does not seem logical since the results to be exacted would not justify the employment of the added weapons and manpower. Granted, flame has a psychological effect upon mankind, but the new doctrine will demand far greater effects than just psychological. The "sea train" could probably find room for this device but not so the Helicopter Landing Force.

AMMUNITION

A requirement has been stated for an antipersonnel rocket to be fired from the small unit antitank weapon. I believe Marines are all familiar with the fact that the small unit antitank weapon, or platoon antitank weapon as some refer to it, is a special purpose weapon. Its special purpose is to defeat armor. It is also well known that a rocket launcher man is burdened down enough as it is with antitank rockets in order to perform his mission. Now, however, some desire his weapon to discharge antipersonnel rockets. First, by the rocket's very shape it could give little or no effects against personnel fired into and, second, consideration must be given to the maximum range of the small unit weapon's rocket which is 500 yards. Have we not sufficient supporting weapons such as light mortars, machine guns and even rifles to neutralize targets at such close ranges? If so, why require the rocket launcher man to divide his *needed antitank rockets* to cope with personnel? Such a rocket would be another duplicating item and a poor one at that. To sanction such a device would be detrimental to any mission undertaken by the new concept since enemy armor could run rampant while antipersonnel rockets ineffectively bounced off their sides. Apparently this, too, is just another item "sure nice to have."

SMALL ARMS

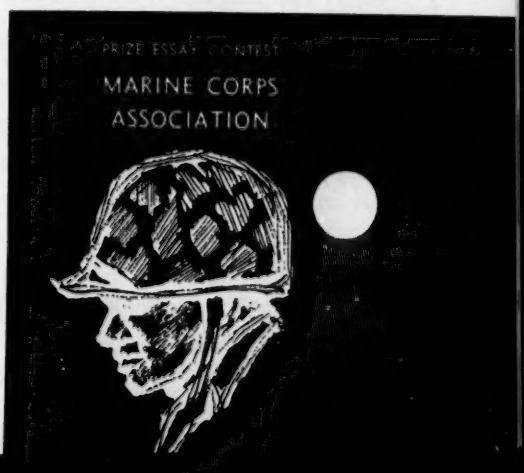
The search is on for a new type submachine gun. Just why nobody seems to know except "it sure would be nice to have." However, it is quite certain that, within the next 10 years, this requirement could be met by those who "need such a device by adopting any new light barrel rifle of any accepted rifle system. Why not provide the new light rifle with automatic fire capabilities and shorten its barrel so its length would not be objectionable? Inasmuch as the submachine gun is used for close-in massed targets the shortened barrel of any new rifle would more than meet the accuracy and performing requirements of a separate submachine gun.

Since the new concept will, of necessity, demand the elimination of different but duplicating weapons the Marine Corps could well begin with its sidearms. The "sea train" could well support different type caliber and type sidearm presently utilized by aviation and ground personnel. Why Marine aviation units should be armed with one type sidearm and ground personnel with another never has been quite clear in my mind. How much more simple, economical and effective would it be to logistically support one type handgun, one type ammunition and the same spare parts? Granted, this is a small item but when considered in the thousands it runs into weight and logistical problems which could well be eliminated by the adoption of one type pistol or revolver for use by both Marine aviation and ground personnel.

REGIMENTAL ANTITANK WEAPONS

The eventual move toward the Vertical Envelopment will have a pronounced effect upon the use of

HONORABLE MENTION GROUP II



tanks since tanks will be too heavy to be compatible with the helicopter lift. The Marine Corps has taken a great step forward in not attempting to match any potential enemy tank for tank and, instead, has channelled its thinking and development toward lightly armored antitank weapons for the defeat of heavily armored tanks. Ontos, the recently developed regimental antitank weapon, is an example. However, this vehicle is not compatible with the new doctrine, weightwise that is. It is too heavy to be helicopter transportable and a contributing factor to that liability is that it is too heavily armored. Heavy armor plate for antitank weapons and tanks is no longer required because, regardless of its thickness, *it can be penetrated.* In addition, near future antitank ammunition and missiles will have the ability to *destroy* the vehicle they hit. Since armor thickness is no longer a deterrent because it can be penetrated, it leaves the door open to strip off token armor presently utilized on antitank weapons such as Ontos. This weapon could be made almost wholly compatible with the new doctrine by discarding all its token armor and substituting a gun shield therefor. In any event, future antitank vehicles should be developed to be extremely fast and light in weight and every attempt should be given to making not only these, but all weapons, austere and, in respect to vehicles, with limited or no amount of crew comfort. The incorporation of automatic transmissions, push button adjustable seats and even proposals of air conditioning should be coldly received. Our future development should inquire into how effective an item can be made, and not how comfortable it can be made for the crew. The incorporation of devices in a vehicle because they would "sure be nice to have" eventually reflect upon performance in that the weapon is taken out of the simplicity and effective class and put into a class where maintenance never ends.

It is only too obvious that equipment supporting the Vertical Envelopment *must* be *reliable* and reliability is directly related to *simplicity.* The trend in weapons development must swing back to one of the basic principles of weapons which has been ignored in the past; namely, *simplicity.* Crew comfort could well be incorporated in equipment when we relied 100 per cent upon the "sea train" which knew no weight limits. But no longer can we afford to sacrifice simplicity and reliability for crew comfort. The emphasis, if we are to survive, *must* be taken off luxury in battle and *Marines* must recognize the fact that in the future they must manually shift their gears instead of relying upon machinery to do it for them.

Simplicity in design and construction of not just weapons, but all items of equipment, is of prime importance in order they be compatible with the new concept. Rapid movement of the Helicopter Landing Force will preclude the establishment of heretofore vast repair agencies inasmuch as the helicopter will not be able to lift the enormous equipment we presently utilize for maintenance. What is more, the new vehicle of movement and supply should not be required to move it. First, there will be sufficient time to set up the repair agencies we are presently accustomed to; second, if set up they could not keep pace with the advancing elements; and third, it would be impossible for the helicopter to logistically support maintenance in the field in the fashion they are now accustomed to. Therefore, the elimination of the multitude of equipment and spare parts we presently carry for maintenance in the field must give way to unit replacement; that is, when a weapon fails to support the Vertical Envelopment it must be rapidly replaced by a like item.

We must immediately re-examine our methods of stating requirements for new weapons. The stock phrase in desiring better weapons is presently to require them to *"be equal to or better than"* the control item in existence. This statement is poor in that it is stated in the alternative; that is, it is possible that a new item being developed, although not better than the one in hand, is equal to it and, as such, quite possibly could be adopted. This would result in the replacement of the older item although the item being replaced is just as good as the one replacing it. The Marine Corps should be *positive* in its requirements. It should state any new item shall "be better" than the one it is to replace and no distinction should be made as to equality. Why replace a weapon with a new one only as good as the one on hand?

The new concept of Vertical Envelopment will be successful only if our policy requiring, stating and procuring weapons is compatible with the end sought. Limitations of aircraft, lift capabilities and rapidity of movement dictate a new and searching look at our weapons requirements. New weapons supporting the Vertical Envelopment must be kept simple for reliability and economy. The number of type weapons and ammunition performing duplicative results must be held to a bare minimum or, more logically, *eliminated.* The sea train was a giant raft capable of carrying equipment of all sizes and types including some which never have been identified. It was a vehicle that enabled anything and everything to follow the Marine into combat. It was a luxury and yet a leech in that it sapped all the strength from those who had to carry the nonessentials from point to point. The Marine Corps might just as well accept the fact, here and now, that the almost luxurious living conditions enjoyed by some in past combat are gone.

Planning for an assigned mission under the new doctrine will carry far greater responsibility than ever before. In addition, it will be more exacting than ever before. But more important, items of equipment to support each mission will be screened again and again for validity for use. Unlike the almighty "sea train" the planners no longer will be able to justify the transportation of an item on the pretense of "it sure would be nice to have." Any item moved by the Helicopter Landing Force will be one that can only serve a particular purpose in the operation planned, and those *that do not fit will be left behind.* USMC

Capt Haslam's thoughts on this subject were probably germinated while he was a test officer for the Marine Corps Equipment Board. At present he is with the 3d Ord Bn, 3d Mar Div.

AROUND THE WORLD WITH SIKORSKY HELICOPTERS

ARCTIC STUDIES—The only access to this arctic research outpost in Northern Greenland is by helicopter. The Red Rock Camp, Nunatarssuag, established by the U. S. Army's First Engineer Task Force to carry out ice cliff studies, receives food, mail, and passengers by Sikorsky S-55, designated H-19 by the Army. The versatile S-55 is an arctic veteran. It has seen grueling service in Greenland, Northern Canada, and Alaska.

ASSAULT EXERCISE—Marines at Camp Pendleton, California, launch a helicopter-borne vertical assault as a feature of a recent major exercise involving 15,000 men. A Marine Corps HRS, an S-55 type, is shown above after landing its assault troops. The Marine Corps also flies larger HR2S and HUS Sikorsky helicopters.

HELICOPTER HISTORY

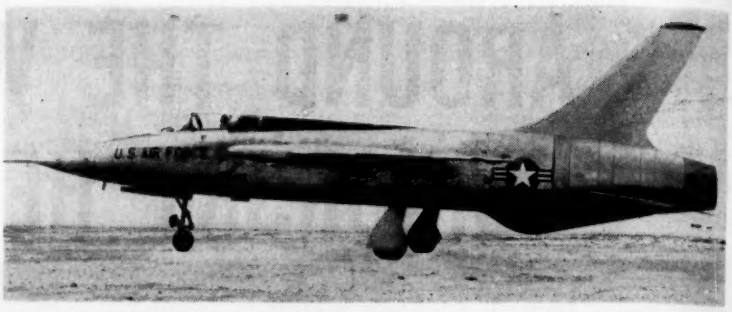
FIRST TRANSATLANTIC FLIGHT

In July, 1952, two U. S. Air Force Sikorsky H-19s touched down at Prestwick, Scotland, after a record-making 920-mile flight from Iceland. This was the longest leg in the first and only helicopter flight across the Atlantic, from Westover Air Force Base to Wiesbaden, Germany. The pilots were Capt. Vincent H. McGovern and Lieut. Harold W. Moore.

SIKORSKY AIRCRAFT

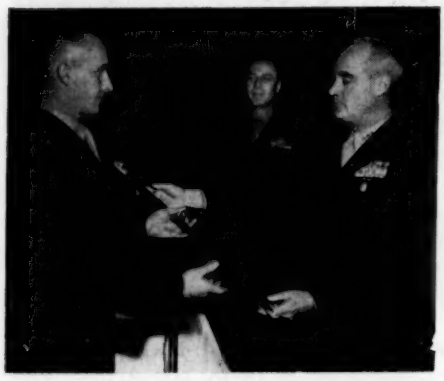
BRIDGEPORT, CONNECTICUT

One of the Divisions of United Aircraft Corporation



The annual reunion of the members of the 3d Marine Division Association will be held at the Marine Memorial Club, San Francisco, Calif. on 19-20 July 1957. For particulars write the Secretary, 3d Marine Division Association, PO Box 548, Culver City, Calif.

For the second year a VMF 114 team has been chosen to represent the East Coast at the All-Navy Gunnery Meet to be held at El Centro, Calif. this summer.



The Sword of the Marine Corps Association was presented to 2dLt J. D. Carlton by LtGen Merrill B. Twining at the graduation ceremonies of the 4-56 Basic Course (above). Lt Carlton, a Civil Engineering graduate of the University of Texas, is presently undergoing flight training at Pensacola, Fla.

A new large assault transport, the Lockheed turboprop Hercules C-130A (above) has recently been approved for purchase by the Marine Corps. This aircraft has a top speed of 370 miles per hour while carrying 20 tons of cargo. It is capable of making transcontinental flights at an altitude of 40,000 feet. This is the plane which has successfully test-dropped the Ontos.

The new Bell Automatic Carrier Landing System will soon be installed for testing aboard a carrier. The system is completely automatic, operating on a combination of radar and radio. The radar locates the plane and determines its position and altitude in relation to the deck. An electronic computer does the rest, sending the necessary course corrections to a device which directs the plane into the correct flight pattern. This system is expected to make possible flights in any kind of weather.

Nuclear air-defense weapons are now in deployment at key installations throughout the country. A proximity type weapon, a hit or even a near miss is not necessary, thus forcing any aggressor planes to operate widely dispersed. The weapons can be most effectively used against high altitude targets as there is the possibility of the destruction of surface objects if used at low altitudes.

Long Beach, Calif. will be the recipient of a unique honor when the first nuclear-powered guided-missile cruiser is named for it. The ship will be the first completely new cruiser to be built since World War II and also the first ship to be armed with a main battery of guided-missiles.

The schedule of competitions-in-arms which Marine shooters may enter has been announced:

May 6-9 *Eastern Division* Rifle and Pistol Matches at Camp Lejeune; *Pacific Division* Rifle and Pistol Matches at Pearl Harbor.

May 10-11 *Elliot, Wirgman* and *Edson Trophy* Matches at Camp Lejeune; Rifle and Pistol *Team Trophy* Matches (Pacific) at Pearl Harbor.

May 13-16 *Western Division* Rifle and Pistol Matches at Camp Matthews.

May 17-18 *Wharton* and *Holcomb Trophy* Matches at Camp Matthews.

June 3-6 *Marine Corps* Rifle and Pistol and *Lauchheimer* Trophy Matches at Camp Matthews.

June 8-9 *Inter-Division* Rifle and Pistol Matches at Camp Matthews.

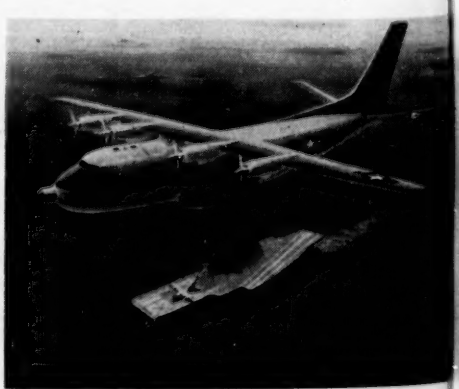
August 9 - September 11 *National Matches* at Camp Perry.

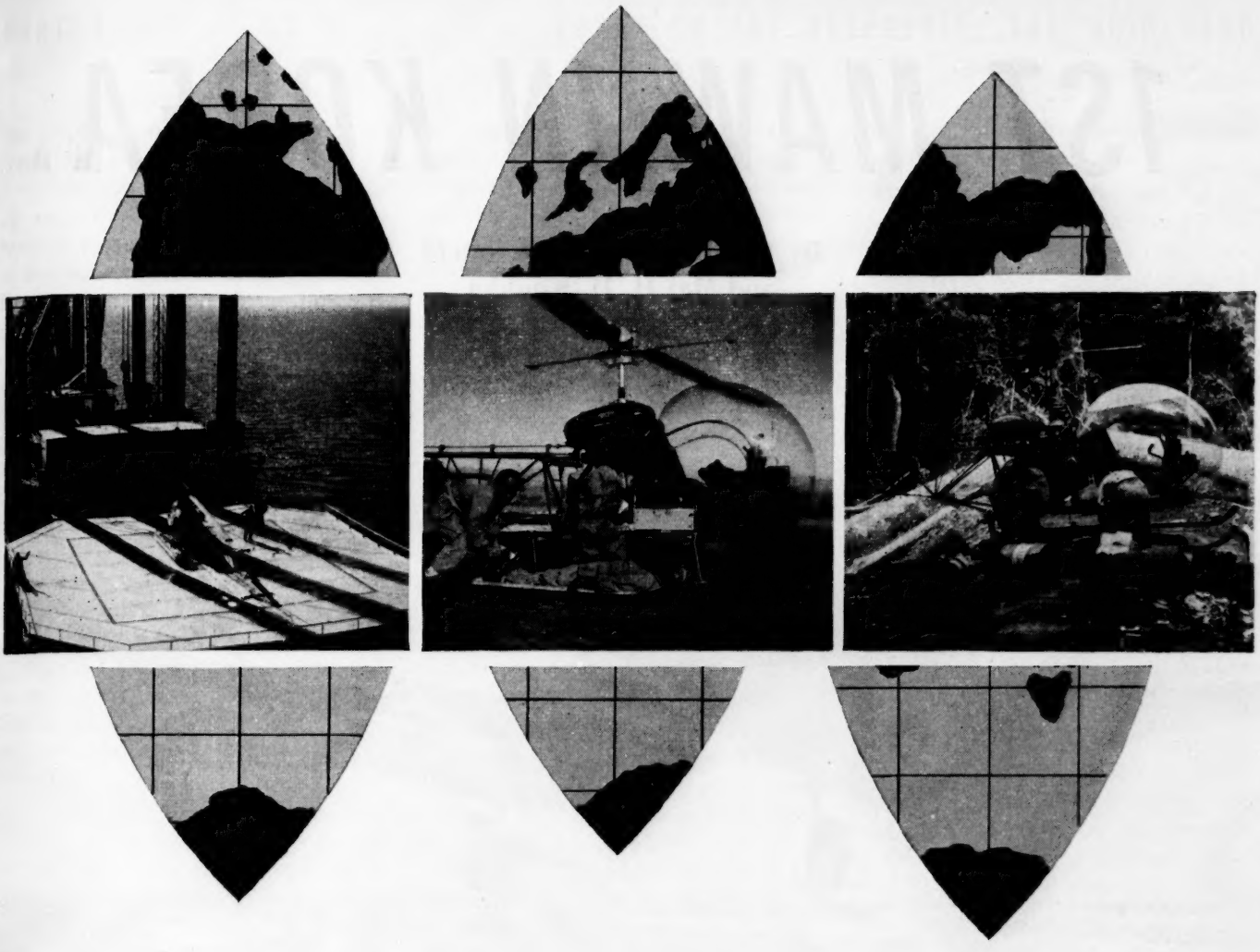
Republic's F-105 (above), having more the appearance of a guided missile than a manned aircraft, has been selected for volume production. This new Air Force plane, powered by a Pratt and Whitney J-75 engine, flew faster than sound on its first flight. It was designed under the Weapons System concept as a nuclear-bomb carrying fighter. Peak production will be reached in late 1958.

Marine All-Weather Fighter Squadron 314 has captured the laurels in the week-long Second Annual 3d MAW Weapons Meet which was held at Mojave. Taking first place in the fighter (air-to-air) phase and second in the attack (air-to-ground) phase, the squadron nosed out second-place Marine Fighter Squadron 311.

Marine helicopter techniques, as described in *Cavalry of the Sky,* by Lynn Montross, have apparently found favor with the Red Army. At any rate, the book has been translated into Russian and published in Moscow, according to the *Military Review.* Neither the author nor his publishers, Harper & Brothers, New York, were consulted in the matter.

Douglas Aircraft has proposed a new utility assault aircraft, the 1906A, for use by the Navy and Marine Corps. It has been designed for fleet aerial resupply and Marine assault missions. The plane is capable of carrier operation. With skis it will be able to operate from mud flats, sandy beaches or snow with a ground run of only 400 feet carrying 58 fully equipped troops.





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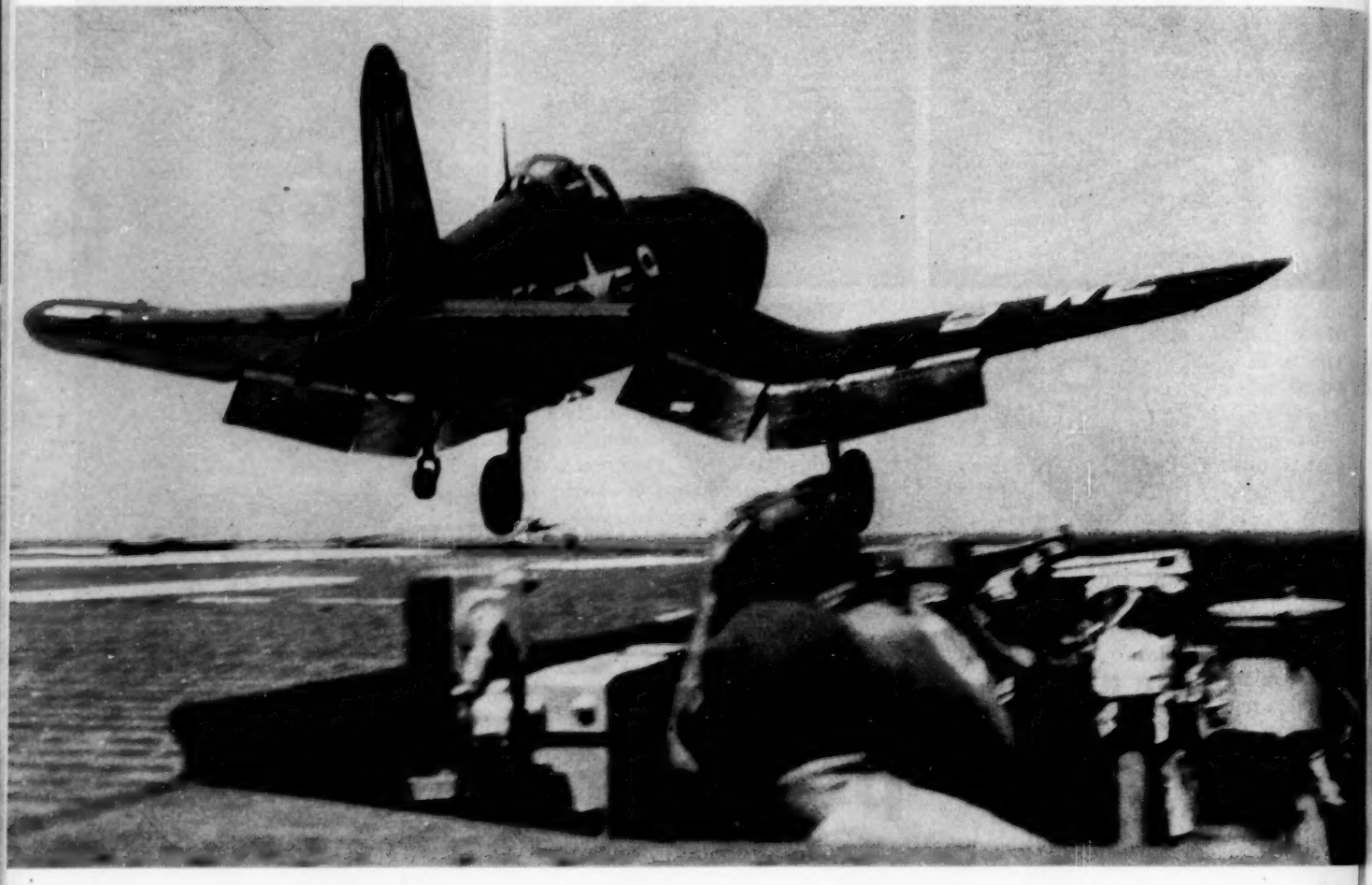
1ST MAW IN KOREA

By LtCol C. A. Phillips (Ret)
and Maj H. D. Kuokka



FOREWORD

TIME HEALS DEEP WOUNDS. THE Korean venture is fading. But as one goes over the diaries of the 1st Marine Aircraft Wing in Korea, living and dying hits a pretty fast clip.

The daily doings unfold the action: Marine pilots as forward air controllers crawl in the fox holes with the rifle-carrying privates of the line; artillerymen as air observers fly with their pilot classmates; Navy hospital corpsmen treat the wounded in the mud and snow of the trenches; pilots fly their planes off Marston matting strips or jeep carriers; bombs are dropped on enemy bunkers; aviators crash into mountains; others are shot down inside the enemy lines; others bail out over the land and over the sea; men are decorated, and men go crazy. And all the while the groundwork on the planes out in the open keeps going on; the paper work in the pre-fab tin-covered offices keeps up and the VIPs keep coming.

Perforce of the kind of breed of cat it was, of all units in Korea, the 1st MAW was perhaps the most versatile. Or as every Marine outfit claims to be, and can prove it, "It was the best damn outfit."

The Korean operations marked the first time that the Wing worked with and for so many different people. Of course, the whole military effort in Korea was of the same order — 22 different nations in varying degrees had to co-ordinate.

In the 1st MAW, however, no less than 32 different supply sources within the Army, Navy, Air Force and Marine Corps supplied the units in Korea and Japan. Supplies ranged from chow from the Army, planes from the Navy, engineering gadgets and gasoline from the Air Force and clothing from the Marine Corps.

It must have taken some doing to get the pipe-lines set up and straightened out, but in 1953 a unit supply officer knew where to get any one of the 8,500 items he might need for

the airplanes, or where to round up fresh beef for supper.

Concurrently with the support of 32 supply sources, the 1st MAW worked under many different bosses at the same time. In addition to the Department of Defense at the top, there were: CMC; Bureau of Aeronautics; CINC, Pacific Fleet; CG, FMF, Pacific; CG, Air, FMF, Pacific; Commander, Naval Forces, Far East; Commander Seventh Fleet; CG, Eighth Army; CG, X Corps, and later directly under CG, Fifth Air Force. This command structure did work. The sergeants major and adjutants became experts in filing and keeping track of orders to know who was who, what was what, and why.

With all this diversification and co-ordination there was a pay-off. The 1st MAW in turn helped to support many different divisions on the line. During the final month of the war — July 1953 — the Wing planes flew more than 1,500 close air support missions for 18 different divisions. These were the 1st Mar Div, with its Korean Regiment; 5 US Army divisions; the British Commonwealth Division, and 11 ROK divisions. Air controller teams with the 18 different divisions were able to talk-in the pilots for a pin-point attack on enemy bunkers and trenches, be the planes the propeller driven ADs diving with tons of ordnance, or jets streaking in at a near 500 mph.

The Wing officers and enlisted men learned to get along with the other outfits as reflected by the citations. Of course, the Wing's first love was that of close air support to the 1st Mar Div, but its work was spread affectionately among the whole UN forces.

TRANSIT TO THE FAR EAST

The Communist North Korean forces crossed the 38th Parallel to invade South Korea on 25 June 1950. The first US troops to land in Korea were from the 24th Inf Div from Japan. They reached Pusan on 2 July 1950.

Shortly afterwards in Washington, DC, Gen C. B. Cates, CMC, announced that Gen MacArthur had requested a Marine regimental combat team with its own air support. BrigGen E. A. Craig soon was on his way with the 1st Provisional Marine Brigade composed of the 5th Marines, the 1st Bn, 11th Marines, Marine Aircraft Group 33 and the Observation Squadron, VMO 6.

At Washington, the Director of Marine Corps Aviation was MajGen W. J. Wallace. The 1st MAW headquarters was then at El Toro. The commander, MajGen Field Harris received instructions on 5 July from CG, FMF Pac, LtGen L. C. Shepherd, Jr., to organize and deploy a reinforced air group — MAG 33.

MAG 33, under Col A. C. Koonce was made up of the Hedron and Service Squadrons, plus the fighter squadrons VMF 214, VMF 323, an echelon of VMF (N) 513, and the radar units — Marine Ground Control Interceptor Squadron 1, and Marine Tactical Air Control Squadron 2, along with VMO 6.

These air elements were to be under command of BrigGen T. J. Cushman. They were loaded in the USS *Gen A. E. Anderson,* the USS *Achenar* and the USS *Badoeng Strait.* The convoy sailed from California on 14 July and 17 days later arrived at Kobe, Japan.

At Kobe the fighter squadrons took off from the *Badoeng Strait* and landed at the nearby Itami Air Force base on 1 August, to clean off the stack smut and to practice some last minute carrier landing approaches. VMO 6 equipped with small helicopters and fixed-wing OY grasshopper observation planes staged to Chinhae, Korea to work directly with the 1st Brigade. MTACS 2 proceeded to Pusan, Korea also to work with the Brigade.

It didn't take long for the fighter squadrons to get into action. Taking off from Itami on the third day after arrival, VMF 214 rendezvoused with the jeep carrier USS *Sicily* in Tsushima Straits and that afternoon launched the first Marine air strike of the Korean war — 8 Corsairs led by Maj R. P. Keller, the executive officer, flew over South Korea and hit enemy targets. VMF 323 re-embarked in the jeep carrier, *Badoeng Strait* on 5 August and likewise commenced operations over Korea.

Two days later VMF (N) 513 (the Flying Nightmares) began night flying over the Sea of Japan from the Itazuke (Japan) Air Force base to add its support.

Meanwhile Marine transport planes were already giving their logistics support. In mid-July, 20 R5D transport aircraft of Marine Transport Squadrons 152 and 352 from El Toro had been placed under the operational control of Commander, Fleet Logistics Air Wing, under CINCPac for airlift operations across the Pacific. VMR 352 aircraft flew between NAS, Alameda and NAS, Barber's Point, while VMR 152 flew the wide ocean stretches from Barber's Point to Haneda (Tokyo), Japan and then on to Itami and later Korea.

PUSAN-MASAN PERIMETER

When the First Brigade jumped off on the morning of 7 August to spearhead the strong UN counter-attack — the drive to Chinju — VMF 323 (the Death Rattlers) and

The Flying Nightmares add their weight to the 'round-the-clock effort

U-Bird drops his load of 3 napalm bombs at 50 feet

VMF 214 (the Black Sheep) from the 2 carriers were there as the Brigade's flying artillery.

A little later as the North Koreans crossed into the horseshoe bend of the Naktong River, a few miles west of Yongsan, to threaten Pusan, only 40 miles to the south, the Brigade got its first real bloody battle. By this time the helicopters of VMO 6 had already commenced the evacuation of the dead and wounded.

Marine aviators on the front lines acted as forward air controllers to direct by radio the planes to the enemy trouble spots. With napalm and bombs the Corsairmen burned and blasted the ridgetop foxholes with their 5-inch rockets. They also dug out mortars on the reverse slopes as well as the machine guns on the strategic points.

The veteran pilots of World War II discovered that this Korean air war was different — at least at first. The enemy planes had been discouraged early in the fight, and there was very little heavy antiaircraft opposition. But the low altitude attacks, necessitated by the low ceiling of the summer rainy season, encountered heavy small arms fire which claimed several pilots.

Furthermore, digging out the camouflaged enemy was like hunting moles. Deadly T34 tanks, artillery or mobile antiaircraft guns lurked in innocent looking haystacks. Peaceful groves of trees sheltered fuel and ammunition. For immediate cover the enemy even smashed their tanks and trucks into mud huts. Probing bursts of 20mm into haystacks frequently set off Bikini-like ammunition explosions.

Pilots diving down on groups of enemy soldiers often were amazed to see them hurriedly get into white native clothing and then turn to wave at the planes in a most disarming manner.

Napalm, dropped from 50-foot altitudes became the pilots' most effective weapon against tanks, troops in foxholes or trenches and inflammable supply targets. The 5-inch HVARs were good against vehicles, trains and gun positions; the 100 to 500 lb. bombs against supply dumps, buildings, bridges and, when VT-fuzed, against area targets and personnel.

But the pilots' favorite was a mix of high explosive, incendiary and armor piercing 20mm automatic cannon ammunition which disintegrated vehicles, stopped locomotives and ignited box cars, supply dumps and knocked out troops like hay before a scythe.

That is how the early fighting looked to Marine pilots in Korea. And that is how they helped loose the Reds' dangerous toe hold at the Naktong bend. One by one the ridges were cleared of North Koreans by the infantry-tank-artillery-Corsair team, and finally the enemy broke and stampeded back across the Naktong.

In his history *The New Breed,* Andrew Geer quoted an Army regimental commander, "The Marines on our left were a sight to behold. They had squadrons of air in direct support. They used it like artillery. It was 'Hey, Joe, this is Smitty, knock the left off that ridge in front of Item Company.' They had it day and night."

The North Korean Communists loosed another unsuccessful push on 31 August, but their time ran out in mid-September when the landing at Inchon served to pinch off the enemy's logistics at the Korean waistband. Then the Reds just folded up in the south. For its work in helping to keep the enemy out of Pusan the 1st Provisional Brigade, including the 1st MAW air support units, later received the United States Presidential Unit Citation.

Meanwhile, back at Camp Pendleton the 1st Mar Div on 15 August 1950 had been organized to wartime strength (less 7th Marines joining on 21 September at Inchon in time for the attack on Seoul). It arrived in the Far East to team up with the Army's 7th Inf Div to become the principal elements of the X Corps. This was the team that was to seize the Inchon-Seoul area.

By the first of September MAG 12 with the remaining elements of the 1st MAW had sailed for the Far East. Simultaneously, the wing commander, Gen Harris, and staff flew to Japan arriving on 4 September, the same day that a typhoon named *Jane* hit Itami Air Force Base with 111-mile-an-hour winds, scattering tin roofs, knocking down telephone poles, disrupting power and water services, and necessitating an aircraft flyaway to other air bases out of the storm's path.

This was the time when the plans for the Inchon landing were being completed by Army and Navy staffs.

An important contribution at this time was by MAG 33's little aerial photo unit which made a series of reconnaissance photos of the landing beaches in preparation for this closely co-ordinated joint maneuver.

INCHON LANDING AND BATTLE OF SEOUL

On 15 September 1950 in one of the most successful, and certainly the most delicately-timed, amphibious operations ever conducted, the 1st Mar Div, following in the wake of a terrific naval bombardment, stormed ashore deep in enemy territory at Inchon. Enemy defenses were no match for the terrific concentration of naval, air and infantry power, and within hours the port of Inchon fell. On the morning of 24 September, regiments of the 1st Mar Div and the 7th Inf Div pushed across the Han River against fierce enemy resistance and forced their way into the streets of Seoul. The battle for Seoul raged

until 26 September, when Gen MacArthur announced the fall of the city, formally restoring the battered capital to South Korean President Rhee on 29 September.

Within the 1st MAW, BrigGen Cushman was tactical commander for air for the Inchon operation. The *Badoeng Strait* with the Death Rattlers and the *Sicily* with the Black Sheep took part in the invasion. VMO 6 was there too, operating from LSTs.

On D-day the fighters added their bomb, napalm and strafing power to the bombardment of Wolmi-do and the Inchon defenses, spotted naval gunfire for the cruisers, and covered the Marines' landing. As the action moved toward Kimpo air field and Seoul, the Marine pilots stationed with the 1st Mar Div as forward air controllers called the Corsairs down repeatedly to break up enemy resistance.

After Kimpo airfield was captured by the 5th Marines at midnight, 17 September, the 'copters of VMO 6 landed shortly thereafter and proceeded with the evacuation of the wounded. By this time MAG 12 had arrived in Japan. Losing no time, VMF 212 (Devilcats), and VMF (N) 542 flew from Itami to Korea to land at Kimpo on 19 September. The arrival of the Devilcats had climaxed a hurried dash half-way around the world to get into action with the big new F4U-5s. Departing Cherry Point on 18 August, the squadron flew its first combat mission at Kimpo immediately after arrival a month later.

To support the Seoul operation, the Far East Air Force started the airlift of aviation gasoline and ammunition from Japan to Kimpo. The surface echelons of MAG 33 arrived at Inchon and moved to Kimpo on 1 October. VMF 312 (Checkerboard) was called forward on 28 September.

The land based squadrons and the carrier based fliers teamed up to fly as the 1st Mar Div's flying artillery, covering Marines and Army infantry as they rooted the enemy out of the houses of Seoul and drove them into the hills north of Uijongbu.

MGCIS 1 set up a radar warning system and MTACS 2 established a Tactical Air Direction Center to direct all aircraft in the XCorps area. It was here at Kimpo that the first Reserve pilots went into action.

LtCol Phillips wrote his portion of this article from the notes he found, left with the Wing in Korea by Maj Kuokka. Now retired, LtCol Phillips was with Marine Aviation since its early days, writing an article for the Gazette on the subject in Nicaragua. **Maj Kuokka** is a career aviator who went to Korea in September 1950 with MAG 12. Later he was a pilot in VMF 212. On his second tour in Korea he served as Air Officer with the KMC Brigade.

By the end of September, the carrier-based squadrons alone — the Black Sheep and the Death Rattlers — had destroyed more than 30 tanks, 300 vehicles, more than 60 enemy guns, plus bridges, locomotives, freight cars and hundreds of tons of supplies.

On 8 October the amphibious phase of the Inchon operation was declared terminated. VMF 312 and VMF (N) 542 remained at Kimpo, while VMF 212 was loaded for return to Itami in preparation for the Wonsan landing on the east coast.

WONSAN CAMPAIGN

With the plan to encircle the enemy north of the 38th parallel, the X Corps forces withdrew from the ground action in the Seoul area in early October for a landing at Wonsan. The remainder of the Eighth Army took over across the entire peninsula.

ROK forces advancing up the east coast had made phenomenal gains capturing the port of Wonsan on October 10, and taking Hamhung and Hungnam on October 18.

The 1st MAW staff headed by Gen Harris flew to Wonsan on October 13. VMF 312 arrived the next day, followed by VMF (N) 513, VMO 6 and the Headquarters and Service Squadrons of MAG 12.

The Naval ships bearing the 1st Mar Div were held out of the harbor while the mines were cleared. The Division then landed at Wonsan on 26 October. One of the rare times in the air-ground association, the 1st MAW had landed ahead of the 1st Mar Div. The aviators didn't miss putting up a big sign-board *"Welcome, 1st Division!"*

Three days later the US 7th Inf Div went ashore at Iwon. All units drove inland or northward, the Marines striking toward the Chosin Reservoir, the 7th Inf Div to the northwest, while the ROK Capitol and 3d Divisions swept toward the Manchurian border.

A former Japanese airfield at Wonsan became the first base of operations for the 1st MAW, but on 10 November well after the capture of Yonpo airfield about 50 miles north, some of the squadrons moved to the latter location. Also Gen Harris moved his CP to the city of Hamhung, not far from Yonpo, to be near the CP of the X Corps commander. Air operations in the Wonsan-Hamhung area were primarily in support of the X Corps, initially for the I ROK Corps and then for the 1st Mar Div and the 7th Inf Div as they came ashore.

The *Badoeng Strait* with the Death Rattlers had moved into the waters off Wonsan accompanied by the *Sicily* which suddenly off-loaded the Black Sheep on to Wonsan airfield in order to pick up a Navy Squadron.

When the Siberian-like winter fell, new dangers came up for the carrier pilots. On the morning of 14 November hard ice, plus 3 inches of snow was plastered all over the deck, rigging, bridge, guns and planes of the *Badoeng Strait*. It took hours of shoveling, scraping and chipping to clear the deck to free the catapult, arresting wires and barriers from the glaze. The planes which had stood the night on the flight deck had to be run through the hangar deck to be thawed out.

During this period when the carrier-based Corsairs reported into the combat area for assignment they frequently did not know whether their mission would be a strike at a by-passed guerrilla pocket in the mountains west of Wonsan, a road reconnaissance to the industrial town of Chongjin, 140 miles up the coast, or a close air support hop for the Marines now in the Chosin Reservoir area. To go properly prepared, a pilot had to be equipped with enough maps to stock a library. Thumbing through them in the cockpit to get to the target area kept him as busy as the proverbial one-armed paper hanger.

Ashore, at Yonpo, poor weather — low hanging ceilings, icing conditions and snow — gas shortages and

R4Ds flew right up to the tip of the Reservoir at Hagaru-ri

such engineering problems as dust in the lubrication systems, clogged-up strainers in the refueler trucks, plagued the early operations.

In their anxiety to help the ground troops, the shore-based pilots were often shut off from their land bases by bad weather and had to land at alternate fields or carriers.

As November wore on, the North Koreans seemed pretty well beaten, and there even was some talk of "Home for Christmas," as the UN units raced for the Yalu.

Then came the Chinese Communist attack. By 28 November, 30 Chinese Communist divisions had slammed into UN forces across the entire front.

X Corps prepared to evacuate. The 1st Mar Div, then at Chosin Reservoir made a valiant debouchment during the bitter sub-zero weather of early December. They were joined by elements of the US 7th Inf Div. Together these forces fought their way south through the swarming Chinese to the beach at nearby Hungnam.

The pilots aboard the *Badoeng Strait* and those at the frigid Wonsan airstrips grimly scrambled from dawn to dusk to help knock out roadblocks, to erase the enemy off the high ground, and to lay down a protective curtain of fire to the rear.

Navy and Australian flyers were in there pitching with the Marines, and Air Force Flying Boxcars made supply drops to the isolated units. OYs and helicopters of VMO 6 flew vital supplies to the encircled units and evacuated the critically wounded.

The Marine ground units — well trained in closely co-ordinated type of air-ground warfare, and with VMO 6 under their control — comparatively were doing all right. But on the east side of the Reservoir it was a different story. Here 3 decimated battalions of the Army's 7th were trapped at a little bay along the shore of the Reservoir and the Reds were squeezing in for the kill. The troops were virtually out of ammunition, food and medicines. Many of their senior officers were missing or seriously wounded, and many of the men were wounded or freezing. A Marine forward air controller assigned to this Army unit by ANGLICO kept calling for more and more planes with napalm, bombs and rockets.

An all-weather pilot of VMF (N) 542, responded only to find the unfamiliar mountains covered with swirling snow clouds. They snaked in under the clouds to scout the ridges, and with FAC directing, dived at flashes on the ground and knocked out a troublesome artillery piece. Later the FAC said that the very presence of the F7F discouraged further action by the enemy that night.

The next day a maximum effort by Wing fighters struck. The enemy was driven off and the convoy started out, only to run into a road block where the narrow road wound through a deep canyon. Here, while the F7Fs and Corsairs bombed and strafed the enemy, in a series of slow passes over the column, an F4U-5 dropped 3 huge para-bags of carbine and rifle ammunition. The troops were able to clean out the road block.

This was a hectic period for the huge 4-engine R5D transports of VMR 152, operating under the Far East Air Force's Combat Cargo Command. They shuttled day and night from Itami, Japan to Yonpo, bringing in vitally needed supplies and evacuating casualties to the hospitals in Japan. A Navy R5D flew up to the Hagaru-ri air strip at the south tip of the Chosin Reservoir. However, most of the flying to this small strip was done by Marine R4Ds and Air Force C-46s and C-119s, flying off snowy, icy runways and under clouds that draped the mountain tops. The Hagaru-ri air strip was rimmed with the frozen corpses of Reds who died nightly in their incessant attacks. From the surrounding terrain, snipers shot at the planes as they took off and landed.

By the time the withdrawal had reached Koto-ri, even TBM Avengers were employed.

Another highlight was when the Air Force paradropped a steel bridge in sections at Koto-ri to replace a destroyed span over a chasm. It was also in this withdrawal that the first Marine jets of VMF 311 got into action at Yonpo.

The radio jeeps moving down with the columns were having their troubles. So an airborne Close Air Support Control Center was established aboard a 4-engine R5D transport of VMR 152. Circling 2,000 to 4,000 feet above the Marine units, this flying radio nerve center brought in constant air support to the troops slowly moving down the icy gorges.

As the X Corps elements reached the sea and loaded aboard Navy ships, the bigger planes flew to Japan, but the little 2-place 'copters of VMO 6 could not carry enough gas for prolonged flights. In this situation the USS *Missouri* invited the pilots to fly aboard. The *Mighty Mo* acted as a ferry boat to take little fellows to a carrier some distance away.

By this time the big airlift out of Yonpo was underway. All available R5Ds and R4Ds took off, not only with casualties, but men and materials for Itami, Japan. From December 11 to 16 the Wing transports flew out 329,000 lbs. of general cargo, 190,710 lbs. of aviation ordnance and 907 passengers.

Yonpo was closed to operations on 17 December. Thereupon the 1st MAW command post moved back to Itami. Its air units were based at Itami and Bofu with the exception of VMF 212, VMF 323 and VMF 214

(which were on the carriers, *Bataan, Badoeng Strait* and *Sicily*) and VMF 311, which with its Panther jets was operating with the Air Force near Pusan.

For the Wonsan operation during which it flew 2,572 day and night sorties and inflicted 10,313 enemy casualties, the 1st MAW received the Army Distinguished Unit citation.

Versatility had been demonstrated. Combat planes had fought alternately from carriers and from captured airstrips; in fair weather and foul; in daylight and darkness. Transport and photo planes and radar ground control units were in support. The planes had supported the ground troops of the fellow Marines, the Army and the ROKs, and in turn used the support of the Army, Navy and Air Force. The Wing had operated on its own, and by turn under the Navy Task Force, the X Corps and the Fifth Air Force. The VMO 6 'copters had landed on mountaintops and in gorges to evacuate the wounded. The 'copters even casually settled down on the *Mighty Mo* for ferry purposes.

With the 3 operations — Masan-Pusan, Inchon-Seoul and Wonsan — behind them, the wing staff took time out to make evaluations: "There have been numerous occasions when a crucial situation was alleviated or when a difficult advance was made only through the co-ordinated effort of ground forces and close support aircraft. . . . The 1st MAW and the 1st Mar Div have had little, if any, difficulty in effecting complete air/ground co-ordination . . . ground forces are properly equipped and staffed to employ air support . . . the product of thorough joint training in peacetime. . . . A cardinal principle that the air commander must locate his headquarters in the immediate vicinity of the headquarters of the ground commander. . . . Command relationships have been cordial and have presented no unsurmountable problems. . . . Close air support operations were conducted according to time tested Marine Corps techniques. . . . It is generally considered that close air support operations were eminently successful. . . ."

US MC

(To be concluded next month)

VMR 152 ran day and night shuttles from Itami to Yonpo

★ ★ ★ ★

When in Doubt

IT HAPPENED in 1947 at MCAS El Toro, Calif., when a lieutenant stood his first watch as Station Officer of the Day.

During the wee hours, a minor crisis, not covered in the OD's instructions, occurred. The lieutenant hesitated to take any action on his own, but he realized — on the other hand — that some action was required.

After some deliberation, he picked up the telephone resolutely.

"Sir, this is Lt ———, Officer of the Day. A minor problem has developed on my watch, and since the instructions say not to disturb the Staff Duty Officer this late at night unless it's important, I was wondering . . . "

On the other end of the line, his mouth open in disbelief, was the Base Commander.

Maj T. J. Saxon

I'm an Old Swab Hand

THE COMMANDING OFFICER of the 6th Marines was making an inspection of personnel and living spaces. It was common practice for company commanders to keep a few men in utilities until the moment of inspection for last minute police details and then, to dismiss them and have them disappear while the Colonel conducted his inspection.

As the Colonel approached the barracks housing Weapons Company, the company commander ordered his final police detail to disperse. The Colonel entered and proceeded to inspect the personnel and living spaces on the first deck.

When the Colonel finished the first deck and started to climb the ladder to the second deck, he noticed a closet in the ladder well which was normally used as a police shed. Retracing his steps, the Colonel pulled the door open to find to his amazement a trembling Pfc in utilities standing at a rigid position of attention.

Quickly recovering from his surprise, the Colonel inquired, "And just what is your job, son?" Hesitatingly and in a quivering voice, the Pfc replied, "I'm-mm the Assistant Police Sergeant, Sir."

"Then I take it this is your post," the Colonel countered and quietly closed the door.

Capt R. J. Lyons

(The GAZETTE will pay $10.00 for each anecdote published. Submissions should be short and pointed.)

Must our

By Dr. Edgar A. Parsons

IN A MILITARY SENSE, THIS ARTICLE is reactionary. The military concepts espoused herein are those of the past, not the present. Modern military concepts assume that the carnage of conflict, the butchery of warfare, are not to be confined to the battlefield, but are to be borne more and more by civilian populations and the industrial economy. An ever-increasing proportion of war casualties are expected to be non-combatants, including women and children. This shift of the traditional military hazard to the non-military sector of society was accelerated by the Industrial Revolution. One hundred and fifty years later, the scientific breakthrough that developed long-range aircraft, and later the atomic bomb, completed the shift from the classic "field of battle." This article is reactionary in the sense that it suggests wars should be returned to a "field of battle" as in the days of old. Our imaginations should be challenged to develop strategies and weapons that will force an enemy to fight us on the classic battlefield—and this can be an advantageous battlefield if we choose it wisely.

The purposes of this article are: a) to suggest a long-range strategy by which the *military threat* to the United States can be countered by the *military forces* of the United States, and with a minimum of casualties suffered by the civilian populace of the United States; b) to reduce the probabilities of a successful nuclear surprise attack against the United States proper; and c) to emphasize the need for a long-range military strategy that recognizes our vulnerabilities and directs our engineering and scientific talents to the achievement of a more satisfactory offensive-defensive combination. Our national objective should be to have our battles fought *by* military personnel and *against* military personnel. Our strategy should be designed to keep non-combatant casualties at a minimum, especially United States non-combatants.

The present difficulty in defending the United States proper may be traced in part to air power and the development of the so-called strategic bombing concept. Basically, strategic bombing envisions striking at an enemy's war-making potential, thereby minimizing the necessity for meeting and destroying the enemy's forces in the field.

The objective of airpower is succinctly stated in the "Basic Doctrine of the United States Air Force." The opening sentence of the chapter on "Employment of Air Forces" reads, for example, as follows:

"War has been characterized *in the past* by a general pattern of events in which armies and navies were occupied with the destruction of like military forces. The characteristics of air forces have changed this pattern of employment since *it is no longer necessary to defeat opposing armed forces* as a pre-requisite to destroying the sustaining elements of a nation's strength." (Italics mine.)

There is much to be said for this concept. On the other hand, more might be said in favor of a return to classic warfare, in which the objective is destruction of the enemy's *military* forces by one's own military forces on a battlefield. The development of three-dimensional warfare did not give license for indiscriminate warfare against civilians.

The United States Air Force has been widely publicized as possessing a capability for "massive retaliation." Similarly, the long-range bombing force of the Soviet Union has been officially and publicly recognized as a direct threat to the United States. Against this Soviet air threat, our defensive capabilities can be expected to do little more than destroy 30 per cent of the attacking aircraft. It is reasonable to believe that our Strategic Air Command would be equally competent in overcoming Soviet defenses to SAC's "Sunday" punch. Soviet offensive air power can overcome United States defenses and destroy United States targets; conversely, the United States air power can overcome Soviet defenses and destroy Soviet targets. The point, however, is not complicated. Military *offense* has ever outstripped military *defense*.

Weakness in military defense, especially against a Soviet air attack, or limited range missiles launched by submarine or other type carriers, has caused many thoughtful Americans to consider the merits of a "preventive" war. A preventive war is not an acceptable military or moral solution to this weakness.

Marathon, Hastings, Gettysburg — has the classic purpose of elimina

...cities be battlefields?

Consider, for perspective, the development of the military threat to the US civilian population.

In World War II, target nomination was frequently based on peculiarly vulnerable weaknesses in enemy industrial resources. At other times, targets were selected for destruction on the theory that *any* destruction would weaken the enemy. These two bombing or targeting philosophies did not always result in the same selection of aiming points. In delivering their bombs to the stipulated targets, thereby accomplishing their destructive missions, long-range bombing aircraft of WW II attempted to *avoid* defensive military forces. The objective, regardless of the bombing philosophy, was to destroy the enemy's war-making capability.

The strategic bombing concept that *any* destruction weakens an enemy would result in every city in the world being nominated as a target. Given WW II technology, the odds against these cities and their non-combatants were surmountable. Bombs used in WW II were small by present standards. Aircraft employed in WW II were relatively slow. Bombproof shelters were not difficult to construct. There was usually sufficient warning time in which to seek and find shelter. Shelter was generally adequate for the brief duration of the attack. Bomb misses or "over-flow" were minor. Normal life could generally be resumed following an attack.

The development of the atom bomb did not change the WW II concepts immediately. At first, atomic bombs were scarce and expensive. With low offensive strength, target selection was a matter of placing limited force on one, or at most a few special structures or installations. Later, the hydrogen bomb made the distinction between "Achilles heel" (vertical) and general industrial (horizontal) bombing technically meaningless. There is no precise way of tailoring thermonuclear results to differentiate between civilian and/or war-supporting industries. Except in special circumstances, a 1957 area-type weapon blots out "military" objectives and "civilians" industries alike. Quotation marks are intended to highlight the fact that, within differing time variations, practically all or any "civilian" installation can be an integral part of a war economy.

A cornerstone of United States foreign policy is our capability for "massive retaliation" with atomic and thermonuclear weapons. Vast sums of money are being expended in the United States and in the USSR for the objective of obtaining bigger bombs, and the proper size of so-called "tactical" bombs. This expenditure of weapons development effort provides no solution to the United States' military-civilian problem, for there is ample reason to believe that there would be no "victor" in a thermonuclear war—a "victor" might well end up as a third or fourth ranking world power. The comparative advantage thus being sought by the "more bang for a buck" concept is illusory.

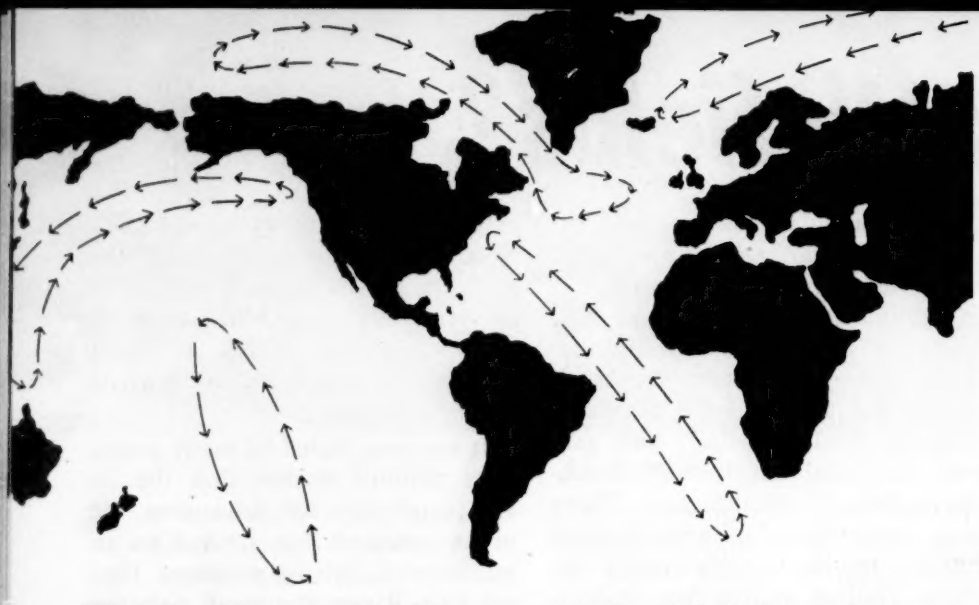
How can we rearrange or reallocate our national resources so as to make them relatively invulnerable to attack? If we cannot solve *this* problem, it will be small comfort to our mortally wounded nation to know that the USSR is being bombed with similar, or perhaps bigger bombs.

It has been stated by many prominent national leaders that the Soviet capability for destroying our urban resources has created an insoluble civil defense problem. Project East River, the most elaborate public study of civil defense to date, concluded that the adequate is unacceptable, and the acceptable tends to be inadequate.

The basic challenge is not to civil defense authorities, but to military strategists and weapons-development personnel. The historical mission of the Armed Forces has been the protection of the civilian population. Technological progress has made it unwise to rely upon the Armed Forces alone for fulfillment of their basic mission. Because of the inadequacy of Armed Forces to insure the safety of the civilian population, the Federal Civil Defense Administration was created. The challenge to our military forces, is to make it impossible for an enemy to destroy our urban resources; if that challenge cannot be met by defense, then our military strength should be deployed in such a way as to minimize the need for an enemy to attack our urban areas. At present, it is almost mandatory for an enemy to destroy our civilian economy in order to strike at our military and national effectiveness.

Our great productive capacity—the industrial might that made this country the "arsenal of democracy" and enabled the Allies to win World Wars I and II—is an attractive target. Technological improvements in weapons have made it feasible for an enemy to render this industrial machine helpless. If superior productive capacity were necessary for the United States to win in the past, then certainly *without* this resource we might lose a similar type of war in the future.

...e enemy's military forces been removed as the primary aim of warfare?



US can force the enemy to fight over open seas or uninhabited areas by changing the deployment of its sea and air forces. By this strategy, the enemy must locate and destroy all our forces in motion or be immediately bombed by those remaining.

What is our greatest vulnerability? Is it not the almost complete integration of our military, industrial and civilian life? The ground zeros of a target system that would destroy our military effectiveness would simultaneously destroy much of our industrial and civilian effectiveness. The immediate threat to the United States is the enemy's capability for exploiting this coincidence.

Two elements, a) the availability of area-type weapons to an enemy, and b) the geographical coincidence of our military and civilian resources, suggest that our primary objective should be a military disposition that would minimize the attractiveness of urban areas to long-range bombing aircraft. We need a new military strategy to counter the threat posed by hydrogen bombs and radiation. We need to take more than a step forward. Boldness and daring are required. If we act wisely, we will analyze our vulnerabilities and the enemy's threat to our way of life. Ideally, a conflict would be fought without bombing the United States, except perhaps for the seat of government. If the enemy chose to bomb targets in the US which contributed little or nothing to our war-making potential, then he would be merely dissipating his resources.

The risks to civilian population from bombing can be reduced. Technological changes can be employed to segregate our military resources from our civilian resources. Further, the new sources of power and atomic power developments make it feasible for us to deploy our military strength at distances somewhat removed from our urban centers and, indeed, hundreds of miles from the United States proper.

At present, powerful centers of strength are based in the United States and are, to some extent, physically separate from the civilian economy. Other powerful forces are based outside the United States itself. In order to destroy the military capacity of the United States, a rational enemy must destroy both domestic and foreign-based United States forces. Such an attack would cause untold population casualties and, if residual radioactive (fallout) potentialities were maximized, would result in further costly destruction.

The quantum leap in strategy which will counter this deadly threat calls for military forces that are *not fixed in location*—but cruising constantly. For the present, these forces may be limited to nuclear powered submarines and naval forces. In the not too distant future, these cruising forces might be propelled entirely by atomic power plants. These fleets should be equipped with sufficient area-type weapons to destroy completely the war-supporting potential of any country which attacked the United States. With such roving squadrons, it would be impossible for the military power of the United States to be destroyed by direct attack. It is elementary that these roving squadrons maintain strict secrecy regarding their movements, and should confine such movements to areas away from world commerce. The job of an enemy would be extremely difficult, for he would have to know, and be able to destroy *simultaneously,* permanently based installations and cruising forces. It is believed that such a co-ordinated series of strikes is technically impossible. Least vulnerable are the forces most dangerous to the enemy—those already armed and mobile. A strategy of maintaining mobile, armed, cruising forces would reduce our vulnerability and decrease the temptation of an enemy to gamble on a knockout blow.

There is another reason why we should take this quantum leap in strategy now. Soviet journals are making more frequent references to the advantages of "surprise" air attacks. Study of a world map, particularly a polar projection with air distances will facilitate appreciation of the Soviet viewpoint. We should do everything feasible to dim the Soviet outlook for success.

The technological basis for a strategy of mobility has been described in more detail elsewhere. Suffice it to say that a strategy of mobility is feasible and attainable.

The prospect of seaborne fleets augmented by cruising groups of nuclear-powered bombers can become reality with today's technology. The bombers would, of course, be armed with retaliatory weapons, and could cruise from pole to pole, and in isolated areas. The crews of these bombers would be prepared to proceed to their prearranged targets if the United States were attacked. To a certain extent, the Navy's patrol bombers, capable of landing and taking off on water, represent this type of capability in being now.

Recently declassified information on the Martin XP6M1 Sea Master describe the possibilities of a new dimension to long range air warfare. The Sea Master can be based in any sheltered body of water. It can use the water runways of the world—70 per cent of the earth's surface. If need be, it can be serviced and supplied by submarine. Such mobile bases are almost invulnerable to enemy attack—quite unlike our SAC bases and Navy shore installations.

Water-based bombers are no

longer restricted by propellers and inefficient hull design. The resulting potentialities obscure the dividing line between the primary missions and weapons of the Air Force and Navy. No less a personage than Gen Thomas D. White, Vice Chief of Staff of the Air Force, has stated: "It is conceivable that a nuclear powered, water-based aircraft may become an effective bomber, suitable for the Air Force's wartime strategic bombing mission."

Submarines equipped with Regulus-type surface-to-surface missiles are another potent and almost invulnerable weapon. The submarine would simply "lay on the bottom" near a target country for periods of several months. It is noted that nuclear-powered submarines such as the *Nautilus* are designed to run for years without refueling. Such submarines could destroy targets within range of their missiles as required. It would, of course, be practically impossible for an enemy desiring to destroy the United States in a surprise attack to seek out and destroy these submarines before they could launch their retaliatory missiles.

A strategy, such as outlined, would place great demands on enemy military forces attempting to destroy United States military forces. Some of our forces would be: 1) bases considerably removed (100-200 miles) from our urban cities, 2) at relatively isolated bases throughout the world, 3) secretly-located, waterborne and combat-ready carrier forces, 4) guided missile-equipped submarines lying "on the bottom" near prospective targets, and eventually, 5) airborne, nuclear-powered bombers armed with H-bombs. Unless a rational enemy were capable of destroying all 5 of these strength elements simultaneously, he would have little motivation for attacking. If an enemy failed to destroy all military targets or had faulty intelligence concerning the location of a few military targets, these remaining US forces could exact a heavy toll.

There is some reason for believing that today's international tensions are augmented by our threat of "massive retaliation" and our inability to turn back a Soviet attack. This United States military deficiency has led some to espouse the "preventive war." Such suggestions only aggravate the mutual distrust of the United States and the USSR. The rationale of the "preventive war" concept lies in our vulnerability to sudden aerial attack and the tremendous concentration of our population and industries. By minimizing our present vulnerabilities, we decrease the basis for any consideration of a "preventive war."

Airfield requirements for intercontinental jets surpass capabilities of most present-day airfields. According to Civil Aeronautics Administrator Charles Lowen, only the 10,000-foot runway at Boston Airport could now handle intercontinental jet traffic. The requirement for such long runways means many existing airfields can never be adapted to service these huge jet airliners of the near future. Except in a few unusual cases, the long runway specification means that new fields will be constructed many miles from our population centers.

In terms of military significance, the new airfield requirements suggest that long-range intercontinental airfields be located outside the H-bomb range of any and all urban areas within the United States. The ideal military runway corridor, according to USAF spokesmen at the 1956 Jet Age Conference, is 7 miles long and 4 miles wide. If these military airfields were properly located away from our cities, the first battles of a future war would not cause the loss of millions of American lives from blast effects, although some deaths would undoubtedly be caused by fallout. Economic and technologic necessities are encouraging (but military and civil defense considerations should accelerate) the separation of our military airfields from our civilian and domestic life.

Paradoxically, the average citizen's aversion to the roaring, screaming and ear-shattering noises of modern military airfields may be the decisive influence in persuading the Air Force to locate these fields many miles from existing communities. After all, the primary mission of the military is to minimize the military hazards and dangers of the civilian population. The United States Air Force anticipates, according to Continental Air Defense Commander, Gen Earle E. Partridge, that "the day is not far off when we shall have atomic weapons at the various stations (air bases) in storage and on the planes in flight." In view of the increasingly hazardous nature of these airfields (non-preventable accidents from the now routine take-off speed of 175 miles per hour, from sabotage, or from direct military bombardment), one can expect that the Air Force will inevitably initiate and promote action to replace existing bases in heavily populated areas with bases at least 20-30 miles away.

The increasing production time and lead time for modern weapons and carriers is gradually eliminating any military advantage to be gained from bombing industrial targets. Because most industrial targets are in cities, this trend towards more destructive weapons will itself move cities into the non-combatant category. Increased man-hour productivity has been completely outstripped by the greater complexity and precision requirements of modern weapons. For example in 1940 about 17,000 man-hours were required to produce a military fighter. In 1956, it required 1,380,000 man-hours to build the same class of

Dr. Parsons, presently a planning officer for civil defense in Washington, received his PhD from Cornell in 1949. During WWII he served as a lieutenant with the 69th Inf Div in the ETO, winning the Combat Infantry Badge and the Bronze Star. He was prompted to write this article "because of a belief that all of the potentialities for reducing US casualties in a third World War have not yet been adequately considered. The US civil defense problem is as much related to our own strategy as to the enemy's capabilities. I hope this article will stimulate the development of a US strategy that will not only ensure victory, but do so at a minimum loss of life to our own civilian population. Modern weapons have made this a new requirement for military strategists."

fighter. By 1960, it is estimated the same category of plane will require 2,150,000 man-hours to build.

What military objective does an enemy hope to achieve by bombing a city? The military objective should have *some* timely relationship with the conflict. As indicated, weapons and their carriers are becoming increasingly difficult to manufacture; thus, if it requires 12 months to produce a modern bomber, the destruction of a bomber assembly plant would (except for partially assembled bombers "in the pipeline") not affect the outcome of a war for 12 months. To carry the analysis further, if an enemy's bomber forces in being were destroyed on D-day, there would be little merit in destroying the cities that contribute to bomber production, provided the war's duration is estimated to be less than the time required to produce a bomber.

The historical trend is: 1) for more complicated ordnance, 2) more time required to manufacture the ordnance, 3) greater military capability for destroying the cities and plants that make the ordnance, 4) decreasing effect of industrial facilities on the military strength of forces in the field, and 5) increasing military significance of ordnance in stocks and in the hands of troops on D-day.

Much of the rationale for the annual $35 billion expenditures in the Department of Defense is the recognition of the "long lead time." What does not appear to be emphasized is the necessity for storage and distribution of munitions and operating material in such a way as to become independent, geographically and functionally, of the civilian economy for a relatively long period of time.

A long-range rationalization of a carefully thought-out program of industrial and military preparedness might be the attainment of such complete self-sufficiency in military goods and stockpiles as to make possible the declaration of "open cities" in the United States. These "open cities" would make no military or industrial contribution to a war, except the supplying of personnel of military age. Any attack on these "open cities" would signify the enemy's intention of waging unrestricted warfare against non-combatant population, an exceedingly grave decision for the enemy. If certain cities could not, in fact, make any contribution toward winning a war, it would seem prudent to at least attempt to reduce their probability of being needlessly bombed, and causing millions of casualties. This is not a novel concept. The cathedral "sanctuaries" of the Middle Ages had their WW II equivalents in unbombed Paris and the "hospital towns" of Europe.

Fallout patterns assumed for "Operation Alert" 1956. Bombs ranging in size up to 5,000KTs were dropped on the 45 cities, SAC bases and AEC installations shown above. In this kind of war, even though we might be "victorious," 10 per cent of the population would be killed and vast areas made untenable by radioactivity.

In the event the development of a modern strategy of mobility has been delayed in the hope of devising acceptable international controls on disarmament, we should delay no longer. The prospects for international agreements are not bright. Time and Soviet intransigence have worked against such controls. On 25 January 1956, Mr. Stassen summarized the problem for the Senate Foreign Relations Subcommittee on Disarmament in highly-significant but little-noticed testimony from an official of Cabinet rank.

"By the time President Eisenhower came to Geneva, we had realized that the basic concepts underlying our older plans—and speciously reflected in the Soviet proposals—were *outmoded.*

"The production of nuclear weapons material no longer needed to be concentrated in huge, expensive plants. It could be produced in simpler installations in many areas. A relatively smaller amount of nuclear material could be made to produce vastly greater yields in terms of explosive power. Capping this development was the development of hydrogen weapons in this country and in the Soviet Union.

"But the most revolutionary change in the picture was cumulative. For almost a decade, nuclear production has been proceeding under no international control whatsoever. During all of this time it has been possible for a country interested in evading prospective international control to hide atomic weapons. The tell-tale radioactivity of nuclear materials can be shielded by containers, beyond the range of any presently known detection device.

"As the stockpile grows, the danger mounts. Because of the margin of error in accounting, with each year that passes, the amount of material available for hidden weapons has increased. With the passage of time we were bound to reach a crucial point at which this margin of error represented a dangerous potential in nuclear weapons. That point has now been reached. . . .

". . . I believe that there is now increased understanding in this country and abroad that verifying the elimination of atomic weapons

under an international arms agreement is not now feasible. The implications of that tremendous fact are becoming known."

If disarmament is not possible, if international control over atomic weapons is not possible, if there is great danger now from surprise attack, if that danger will increase as intercontinental missiles become available, if a rational enemy will not attack without surprise and absolute assurance of destroying all retaliatory capability, and if a mobile military strategy provides that retaliatory capability against any known or conceived weapon, then surely it becomes incumbent upon us to develop and implement such a military strategy of mobility.

Returning modern warfare to the historical battlefield and the adoption of a strategy of mobility would go far to accomplish the basic objective of President Eisenhower's "open skies" proposal. This proposal, as expressed at Geneva on 21 July 1955 to the leaders of France, Great Britain and the Soviet Union was

". . . to provide within our countries facilities for aerial photography to the other country—we to provide you the facilities within our country, ample facilities for aerial reconnaissance, where you can make all the pictures you choose and take them to your country to study, you to provide exactly the same facilities for us and we to make these examinations, and by this step to convince the world that we are providing as between ourselves against the possibility of great surprise attack, thus lessening danger and relaxing tension."

The theory behind this proposal, according to Mr. Harold E. Stassen, Special Assistant to the President for Disarmament, is that "the destructive force of H-bombs is so great that no nation would risk an attack unless it could have such an element of surprise as to prevent counterattack."

A strategy of military mobility would always make it possible for a heavy counterattack to be launched, for there is no known weapon capable of hitting a moving target at ranges of several hundred miles. Nor is there likely to be such a weapon in our generation. The physicists and scientists of the United States and the Soviet Union are working feverishly to produce reliable surface-to-surface missiles that will hit *stationary* targets, such as cities. Despite all the publicity there is little apparent improvement over the German's 200-mile range ballistic V2 of 12 years ago. Problems of location of *moving* targets many hundreds of miles away, friend or foe identification, and complete assurance of 100 per cent accurate intelligence on the precise dispositions of the enemy and all his probable and possible allies are completely beyond the realm of today's known technology.

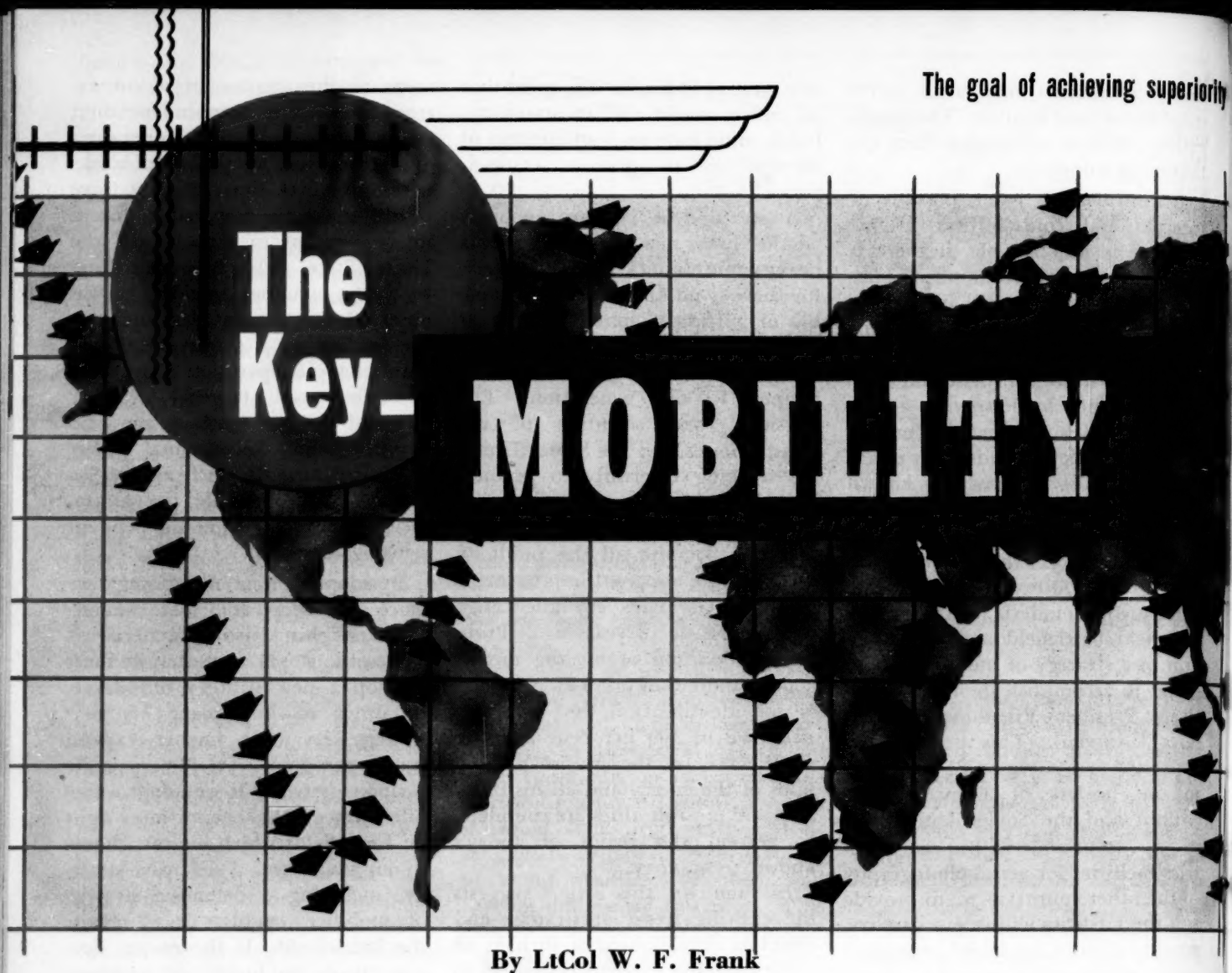
In summary, this article suggests the existing trend of strategy and weapons development is such as to cause excessive civilian casualties in wartime. The primary mission of the military arm is the protection of its citizens and government, and the minimizing of the number of civilian casualities. That mission cannot be completely accomplished when both contestants possess great offensive power and little defensive capabilities. Our vulnerability lies in the fact that our military bases are highly populated areas. This vulnerability would be decreased and civilian casualties decreased if military strategists directed weapons development to the attainment of an extremely mobile, semi-independent military force, capable of operating away from bases for periods of weeks or months at a time. Such a force would make it impossible for a rational enemy to "knock out" the United States unless he were willing to accept national suicide. It was observed that current developments are leading to a geographical and chronological separation of military and industrial targets. Nuclear powered vehicles (such as the USS *Nautilus*) and conventional power motivated aircraft (such as the Sea Master) make feasible the attainment of these semi-independent cruising forces.

By adopting a mobile strategy, we place the enemy at a disadvantage. Much of his existing material is made obsolete. To counter, he must develop a new strategy of offense. In order to implement *his* new strategy, he must further expend scarce resources for the requisite weapons systems. If we adopt a mobile strategy the enemy must fight on battlefields which we can choose to our advantage. A defensive strategy, including a defensive strategy of mobility, enables *us* to choose the battlefield. If the enemy does not choose to fiight, we maintain our national objective of peace. Should there be a war, the battles resulting from a strategy of mobility will be fought by and between military personnel, with relatively incidental casualties to civilian populations. This strategy returns the military responsibility and hazards to the militarists.

Finally, a mobile strategy reduces, if not eliminates, the possibility of success in a surprise nuclear attack. Unless *complete* surprise can be insured in a world of nuclear plenty, it will be disastrous for *any* nation to initiate modern war.

Our technology and our industry present us with an opportunity to erase from our minds the fear of surprise nuclear attack. Let us seize this opportunity to overcome the dangers of war in the same manner as the two preceding generations have utilized technology to eliminate the peacetime dangers of starvation and physical want from the Christian world. USMC

Semi-independent cruising forces of air and sea power



The Key—MOBILITY

The goal of achieving superiority on th

By LtCol W. F. Frank

MAURICE WROTE "THE ULTIMATE object of mobility is to obtain superior power in battle." This goal has been before every commander in battle. Each has endeavored to move his forces into action before his opponent could assemble or rally his own. Thus, there has been not only a requirement to move forces but to move them at a faster rate.

Although Maurice defined the "object" of mobility, the meaning of mobility was not set down. Mobility is defined as the quality or state of being mobile, militarily as capable of being readily and rapidly moved about. By the mathematical process of substitution, *mobility* can be initially defined as the quality or state of being capable of being readily and rapidly moved about. In a pure sense, this element of "movement" is mobility as generally thought of by the military. It implies speed, and the obvious conclusion that the faster and more widely forces travel, the greater is the mobility of these forces.

These forces have been and are composed even now of machines and men. Machines not only include means of movement but also the means with which men actually conduct war; the arms so to speak, individual and supporting. The passage of time, the advance of civilization, and the ingenuity of men have brought the simple weapons of war of yester-year to the stage of weaponry known today. With weapons it has been a state of progressive development. In contrast, the movement of men in battle has followed that of a pendulum, afoot and mounted, then afoot and then mounted. This seeking of the best means for movement has sought the goal of regaining superiority in battle after an improvement in weapons.

It has been an unchanging characteristic of man that he has sought to do all things faster. Discovery of the means of applying the power of steam engines to vehicles began to make changes in the mobility of armies. From the earliest times the movement of troops to battle had been limited to the distance that a man or horse could cover and *still be capable of fighting.*

The employment of railways increased the pace of strategical maneuver. Paradoxically, however, the range of tactical movement became limited by the newly-gained fire power. Although it became possible to move larger masses of men and their supplies (over greater distances and faster) the end of the railway line was the limit to maneuver and the result was a *decrease in the mobility of operations.* Thus man, in seeking to concentrate greater forces at a given point suddenly discovered that an improvement in the ease of movement was offset by restrictions upon direction of that movement.

The discovery and development of the gasoline-powered vehicle offered an opportunity to partially overcome the restriction on direction of

riority on the battlefield has always revolved about the point of seeking the best means for movement

movement imposed by railroads. World War I was the first opportunity to employ this new means of improving mobility. Yet the suddenness with which this war became a static battle likewise hobbled the horsepower of the truck. Armies treated, of necessity, the motor vehicle as they had the railroad earlier; a means of amassing men and supplies. With the war at this point reduced to actions emanating from elaborate trench systems, MajGen J. F. C. Fuller wrote "the tactical problem thus became one of reinstating mobility, and the first solution was sought in vastly increasing shellfire — that is, in heavier blows — which was rendered possible by substituting the truck for the ammunition wagon." Now commanders began to regain some ability to mass force against an opponent. The great artillery battles bludgeoned and battered opposing defense systems and yet the advantage of mobility afforded by the use of motor vehicles to mass supplies and forces was not forthcoming. It came as somewhat of a surprise to the commanders to learn that the cratered areas produced as a result of these great artillery battles proved to be as effective an obstacle to forward movement as the original entanglements and trenches had been initially, and for the destruction of which the massive barrages had been fired.

At this point, a general air of stagnation set in as regards mobility. It is true that motor vehicles became larger, faster and more efficient but generally speaking, no direct corrective effort was made to regain mobility over ground cratered and ploughed by the massed artillery fires. Increased dependence was placed on motor vehicles and their designs generally directed employment over road systems. To overcome obstacles, smooth out craters and create even primitive roads, road building equipment was added to armies. Fuel consumption demanded transporters and the cycle began. More vehicles required more fuel which required transporters which required roads which required road building equipment. Heavier and faster vehicles only repeated and increased the problems. So most commanders entered WWII with a mobility generally tied to roads. In truth, because of the increased ease of transporting supplies and men, commanders unfortunately amassed greater quantities of stocks required on the front lines. The end result was that they became as tied to roads as they were bound by rail during WWI.

At the beginning of WWII, the lessons of WWI regarding artillery fire and its effect on mobility seemed to have been forgotten.

Tanks, motorized troops, personnel carriers, self-propelled artillery—here were the elements which would provide mobility as commanders had sought it. Using German success as the key to mobility, Allied armored and mechanized divisions, corps and armies came into being and remained. Yet even while these very copies of the "key" to mobility were being made, the key itself showed that it had not opened the door to mobility.

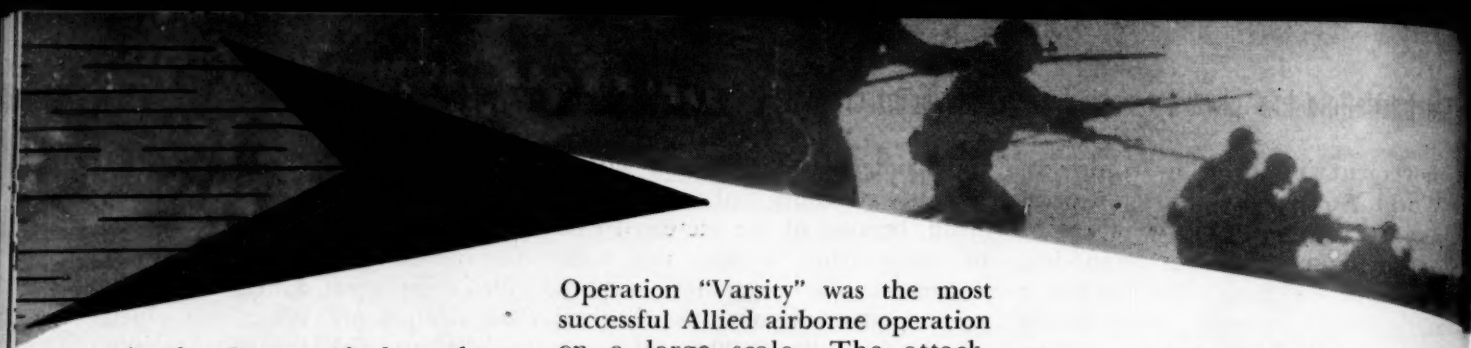
That such was lost to the Allied commanders is evident in the observation of BrigGen Robinett, USA (Ret) that "In the European theater . . . in Allied Force headquarters and in Twelfth Army Group headquarters . . . the *concepts of battle and of logistical support* originating in these headquarters displayed a uniform lack of imagination *in concepts of mobility*" (italics supplied). The fact that over 10 years have passed since the end of WWII has made little impact in the concepts of mobility.

As to the present state of concepts it is of pointed interest to observe that in a press interview in the spring of 1956 Field Marshal Montgomery stated "The armies of today have to a large extent *lost their mobility;* they are becoming roadbound and are weighted down by a gigantic administrative set-up" (italics supplied). This statement was made a year *after* he said "I'm for mobility. Absolute mobility! That's the great danger with modern equipment. When you clutter people up with things, they can't move." It is not just the matter of "cluttering people up" with the things that provide protection, fire power and shock effect that renders armor less mobile. Sir John Slessor, Marshal of the RAF emphasized this problem of logistics in a recent lecture when he asked, "In a war in which nuclear weapons may be used against our line of communications, can we rely on the supply of vast quantities of fuel and ammunition required to sustain modern mechanized and armored divisions with their mass of atomic weapons?"

Thus in mechanization of forces, commanders have not found the complete key to mobility for they are bedeviled by weight, the need for favorable terrain, the requirement to eliminate bypassed obstacles and the problem that so long as that heavy army up front consumes so much, the very act of keeping it alive will create a Frankenstein monster behind.

The airplane, latecomer to the machines of war, offered a possibility to achieve the long sought mobility. In this machine, there was speed, range, surprise and the capability of bypassing obstacles. It was a newcomer to war and its capabilities and limitations were not known. Some commanders looked upon the airplane as an extension of the power of artillery and employed the weapon primarily in this role. Still other commanders saw in it a means of moving troops, equipment and supplies, limited in numbers and amounts but sufficient if and when applied at the proper time.

LtCol Frank served a tour with ONI from 1952-55. During that time "study and research concerning foreign armed forces . . . emphasized the ponderous and weighty nature of our armed forces and it became apparent that mobility was improperly understood." These were his reasons for writing this article. Prior to this assignment he was Asst Naval Attache in Moscow. He is presently ExO, 3d Service Regt, 3d Mar Div.



As the Germans had sought to achieve superiority in battle by employment of armor, so did they seize upon the airplane to provide additional superiority, perhaps relying entirely upon the principle of surprise coupled with mass at the proper time and place. The battle for Crete was the proving ground of airborne assault. Crete fell to the German forces. The effect of the employment of this new machine in war was dynamic, nor could it have been otherwise. Now the assault could be launched with secrecy; any point could be the objective; defenses could be overflown, surprise was almost germane; massing of superior forces at the very objective; all this was at hand! Little time was lost in emulating the German airborne concept.

The facts that most infantry supporting weapons were not air-transportable and supply would pose problems were acknowledged. The thought of rapidly moving groups of infantrymen armed with weapons with a maximum delivery volume of fire, able to pass over defensive systems, capable of appearing en masse at a given point all overshadowed the past proven facts of battle and the key to mobility was again thought to be in the door. The Allies were quick to take up a concept which offered the prize of fewer men and less equipment accomplishing more. Costs would be lowered. The United States, unaware of the exorbitant cost of the seizure of Crete, created a large airborne force. Such a force is by far the most costly and *least mobile* form of ground troops.

It is interesting to note that the Cretan operation was the largest independent airborne operation of WWII. The Germans never again employed airborne troops independently. Likewise it is of interest that the Soviet Union which had pioneered in mass airborne operations and had numerous parachute troops never employed them in this role. Operation "Varsity" was the most successful Allied airborne operation on a large scale. The attack, launched against the east bank of the Rhine near Wesel in conjunction with a river crossing, owed most of its success to the facts that it was begun *after* the main assault crossing had started and could be supported by long range artillery fire. Major airborne assaults pointed out that the weakness in heavy supporting weapons, the inability to counter enemy armor, the problems of aerial resupply, the staying power of airborne troops, the need to link up rapidly with properly equipped and supplied ground forces and the need for overwhelming mass surpassed the advantages of ease of movement and rate of movement. So the employment of the airplane as a means to achieve mobility failed, even though it potentially offered speed, range, secrecy, surprise and a favorable capability of employing mass.

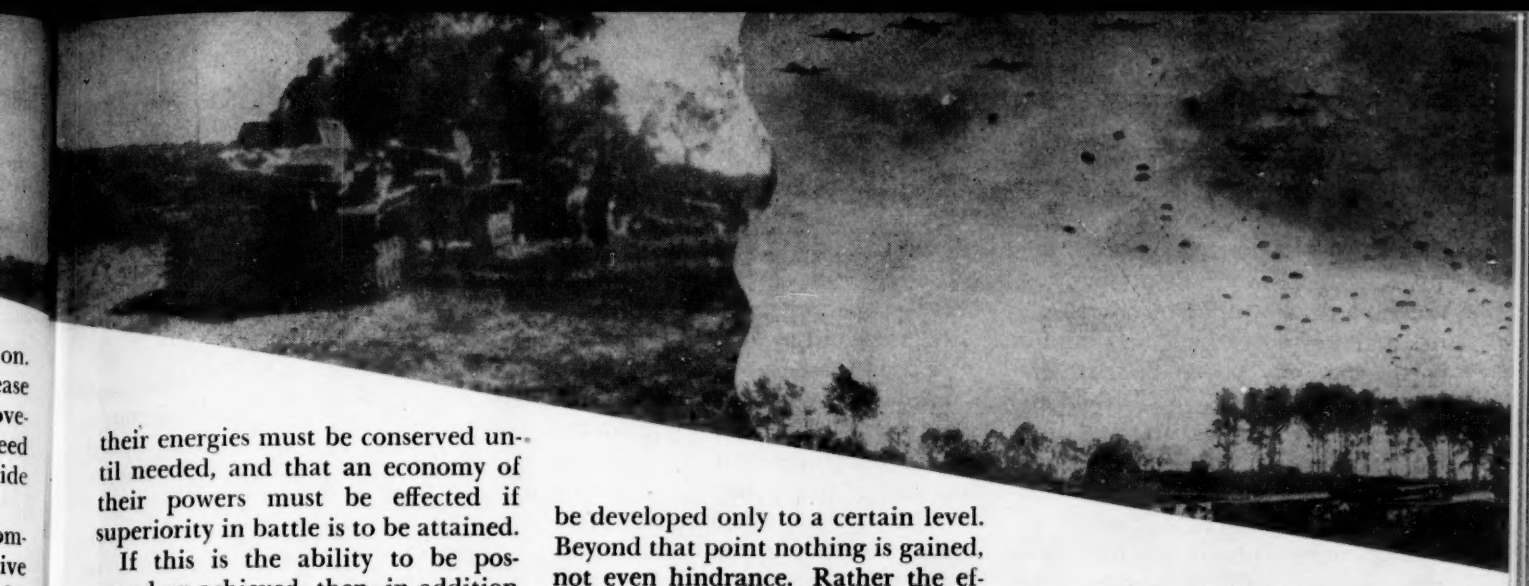
In the search for means of attaining superior power in battle, commanders have developed and employed each means that would provide ease of movement and speed of movement. The railroad, motor vehicle, armor and airplane, each in its proper time, offered these sought-after goals to the commander. Yet in each instance, the commander did not achieve mobility *nor* its object. Invariably he found himself to be less mobile. Each mode of easing and speeding up transport did that very thing. The forces were transported to the battle, but once there, the machine failed to give them mobility.

MajGen R. W. Grow, USA (Ret) wrote, "There is a marked tendency . . . to confuse *transportability* with *mobility*. In the old days, infantry was sometimes transported on horse, but this didn't make it cavalry. Today infantry may be transported by rail, motor vehicle or aircraft. *But infantry fights on foot!*" To say that infantry in LVTs moving to a beach is less mobile than when in trucks traveling on an expressway or when in helicopters is erroneous and confuses principle with implementation. There is no question but that ease of movement and rapidity of movement is essential to mobility; speed and machines alone do not provide mobility.

If one of the elements of the combat forces, machines, does not give mobility, then perhaps the other element, men, must be considered. There are many who believe with utmost sincerity and conviction that the infantry with mobility and fire power will play as decisive a role in any war of the future as in the past. From the original Army field tests (1954-1955) " . . . it was concluded that until much more new equipment, giving more and larger-range fire power, electronic ground reconnaissance, and a higher degree of mechanization actually is here, men must take their place." The Army historian, BrigGen S. L. A. Marshall, is one of those proponents who believe in the key role of the infantry, and the problem of mobility is of grave concern to him.

Marshall does not believe that mobility comes primarily from the machines which give speed and reliability. To him men are the key to mobility. From and within men there must be the ability and willingness to enter into the fire fight, to endure the enemy's efforts, and then to deliver fire in superiority over the enemy. This does not mean that there must be superiority in numbers but superiority in methods and abilities. Liddell Hart in his book *The Rommel Papers* and in associated studies on North Africa, has shown how a numerically inferior force has many times checked, isolated and destroyed a vastly larger force. Neither secret nor new, the method is based upon superior mobility and superior fire power at the chosen point of contact.

Of necessity, in future wars a commander must accomplish as much or more as now with fewer men. This means that maximum use must be made of the capabilities of men, that



their energies must be conserved until needed, and that an economy of their powers must be effected if superiority in battle is to be attained.

If this is the ability to be possessed or achieved, then, in addition to machines for moving forces, there must be developed in men endurance, courage and the will to fight. To accomplish these things in and for men, there must be a reduction or elimination of the fatigue and fear that are casualty-producing and reduce effectiveness. It is not sufficient to merely equip men with weapons and train them to use these instruments correctly. The technical aspects can be mastered by anyone, given sufficient time. The vital thing is to make provision within men themselves to utilize these weapons effectively and efficiently.

To do this requires a physical and mental well-being. This state is not achieved merely by food and rest. It requires a conditioning that is based upon the realization and acceptance of the fact that endurance is a matter of nerve and reaction as it is related to the physical capabilities. Men who are physically weary are slow in their responses. They are aware of this and its result—that in battle celerity and split-seconds can mean life. Let these be lacking and injury or death is inevitable. When this is before men, they become fearful, overcautious, reluctant — more hindrance than help. Their interest becomes self-preservation even to the point where they will become an actual casualty because they cannot move. The nerves sense the danger, but so strong is the reaction of fear that physical movement is impaired.

If men are to combat this fear which results from fatigue, then they not only must be physically conditioned, but every effort must be made to husband their strength and to eliminate those harassments which sap it. Actual physical strength can be developed only to a certain level. Beyond that point nothing is gained, not even hindrance. Rather the effect can be detrimental. Disproportionate fatigue is induced and the will to continue and stamina decline. There is a certain amount of weight that each man can carry and still be effective, varying with his structure. He can be conditioned to carry this weight almost indefinitely. But he cannot carry additional weight and retain his effectiveness no matter how much conditioning and training he is given.

When brought to this point, men achieve a sense of pride in their physical ability, confidence and the will to fight follow. This physical state of well-being and faith in self will not permit fear—except that sort of fear of not doing all that can be done. In this state of mind men will go anyplace and do anything willingly. They will know how to husband their strength and to be alert. Military history is marked by incidents when a small group of rested, alert men defeated a much larger force of men whose physical and therefore mental powers were impaired.

The welding together of machines and men in the search for mobility is not an incompatible union. Each is dependent upon and yet interdependent of the other. When employed in harmony, they embrace the basic *elements* necessary to achieve superiority in combat—ease of movement, rapidity in movement, stamina, endurance and the will to fight.

It is not sufficient merely to have these elements of mobility. These elements must not only be properly organized and employed if success in battle is to be achieved. They must be properly led if their potential is to have its full impact upon the enemy.

The commanders of these forces must have vision and imagination in the conduct of their operations. They must be able to perceive what is to be gained by rapid, fully supported movement which understands and makes maximum utilization of the potential possessed. They must not be cautious and slow-moving in thought and action. Leaders must recognize, accept and take advantage of the austere and severe nature of combat, discarding the heavy, creature-comfort-providing supplies and equipment that impede progress. Objectives must reflect a here-today-gone-by-morning attitude rather than a there's-a-comfortable-place-and-good-shelter concept. They must accept the need to decentralize control to keep their forces moving and at the same time they must demand limited control from above. In their planning and execution commanders must endeavor to keep their minds at the same mobile levels as their forces.

BrigGen Robinett points out that, "In a military sense, mobility implies more than just mobility in equipment and organization. It is also a state of mind. If it does not exist in the minds of responsible . . . military leaders, mobility is impossible on the battlefield even though equipment and organization of forces make it possible. The lack of mobility in mind will result in rigid, shortsighted plans and sloth-like operations which tend to degenerate into static situations."

Tactical and strategic skill in planning is not sufficient. Commanders must consider the abilities of

the forces which are to execute these plans. The greatest concern is oft times devoted to conditioning the machines of war for battle. Training for men too many times is concerned with tactics and skill in arms. What purpose is served if men are not capable of employing these tactics and weapons when the time for battle suddenly bursts upon them? Commanders must allow for and ensure completion of the physical training required to give men confidence in their endurance. A leader must accept the necessity to train his men to fight without reliance upon the comforts of the rear areas. Men cannot be put in fighting condition as a machine can be—in a few hours. A commander must have a complete understanding of the physical machine that does the fighting and must put it into combat condition and keep it there, for without this all else is of no avail in battle.

Commanders must not only possess "mobility of mind" but they must also appreciate mobility in terms of logistics. This is not just the problem of keeping supplies moving to the using units. It is an understanding of the types and quantities of logistic support required. This is not only beans and bullets but also the logistics in personnel—replacements and casualties. In history there have been many brilliant strategists and tacticians. In each instance their successes were founded upon their abilities in logistics equally with their plans. Their failures inevitably were assigned to insufficient attention to logistics.

Forces, regardless of composition, employment and leadership, must be sustained if they are to be successful. Without a means of sustainment, engines stop, guns cease firing and men collapse. Enormous amounts of supplies are required to keep in motion the varied forces in war. The means required are not available in the countryside today as they were in the past. Commanders must devote time and thought in planning to ensure that forces can be supported logistically, not only for their formation, but in their employment as to supplies and personnel.

Commanders can no longer be assured of logistic support emanating from ports and steadily fed to them via railroads and highways. The ever present threat of nuclear warfare almost prohibits reliance upon such means. Once committed to action, commanders may well have to rely primarily upon the logistic support they can carry with them. Air Commander Wykeham, RAF, told the press that, "The army strategy and tactics of World War II must be scrapped in an atomic war. Fighting units must carry with them all the supplies they need."

The threat of nuclear warfare is not the only factor which will require a greater consideration of logistics by the commander. Small, localized wars may be fought in primitive areas of the world where proper roads and rail systems do not exist. The ever-increasing aspect of guerrilla or partisan activity in such wars makes the present system of supply-route reliance costly in men, materials and effort. Commanders must make maximum effort to keep their forces austere yet sufficient, lean yet enduring, strong yet not ponderous. Logistics must be given a full consideration by commanders in organization, employment and support of their forces so that these forces may be employed successfully at any time, in any place, under any conditions, without restrictions.

If this can be done, then it may be said that these forces possess mobility. But this mobility is not just being capable of being readily moved. Commanders have employed various machines and still did not achieve mobility by these means alone for, in themselves, machines cannot fight. Men can fight but they are subject to lack of endurance. However, when men and machine are combined they can provide the will to fight and the endurance of men can be improved. Yet these two elements must be sustained, supplied and properly commanded else they cease to be effective.

Thus, mobility is comprised of machines, men, logistics and leadership. It is defined as "the capability of easily and readily bringing forces into action in such condition and with such means as will permit maximum effective application of the commander's will until the goal is achieved." USMC

★ ★ ★ ★

Capt Cukela

DURING THE SUMMER of 1937, a buddy and I were transferred to the old Marine Barracks, NOB, Norfolk, Virginia to await further transportation to China aboard the USS *Henderson*. Capt Cukela was the CO at the time. Being very warm on the day we reported in, we were greatly relieved when we dropped our sea bags in front of the double screen doors blocking the entrance to the barracks. Suddenly a voice in broken English bellowed, "Make vay for the Ceptain, make vay for the Ceptain," and out stormed Capt Cukela very much chagrined. After several steps past us, he stopped, turned around and with a look of sheer anger and contempt proceeded towards us. Pointing at my buddy he demanded, "You know who I am?" With trembling knees and a voice hardly audible my buddy replied, "No sir," at which the Captain boomed, "You don't know notting!" The Captain's eyes, still teeming with anger and contempt, then shifted to me. Again the identical question was asked except that the "you" was doubly loaded with emphasis. Figuring since my buddy's answer was "no," I would take a chance and reply in the affirmative. So with buckling knees and a lump in my throat I replied, "Yes sir." With a roar that shook the entire length and width of the Marine Barracks the Captain bellowed, "You know too goddamn much!" then turned around and walked off leaving us somewhat dumbfounded and bewildered.

MSgt Joseph Rinyak

(The GAZETTE *will pay $10.00 for each anecdote published. Submissions should be short and pointed.)*

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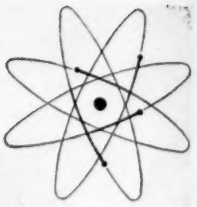


By Maj E. J. Kritter

MANY IDEAS HAVE COME FORWARD regarding the defensive measures that should be taken in the event we are engaged with an enemy capable of employing the nuclear weapons. There are some misconceptions that because the nuclear weapons are so new and so great in magnitude in comparison to the "conventional" weapons, that new means of defense for the individual Marine must be found. There is no doubt that new means of defense in warfare must always be sought, especially with the constant improvement and change in weapons and tactics. But we should remember and emphasize that the means of defense now taught the individual Marine are still applicable and effective even in the case of the new nuclear weapons.

The atomic bomb is different from "conventional" weapons in that it is a triple threat weapon consisting of blast, thermal radiation (heat) and nuclear radiation. Each of these threats travel in a straight line so that the principle of line of sight shielding is effective for blast and thermal radiation, but not complete for nuclear radiation.

Field shelters must be designed to give the maximum protection with the minimum expenditure of available manpower, equipment and material. The main protection for an individual against an atomic burst is to be out of the direct path of the blast, thermal radiation and nuclear radiation (ionizing waves).

Increased attention must be given to the organization and proper construction of field fortifications in order to render them effective against atomic explosions. The present design of field fortifications constructed to withstand near or direct mortar and artillery hits, will be effective at middle damage ranges in protecting personnel from atomic explosions.

Protection against all effects can be provided with least effort by building fortifications below the natural surface of the ground. Any cover that shades the individual will shield him from burn. To protect from nuclear radiation requires appreciable thickness and density of material. Since much of the radiation received at the bottom of a hole comes down through the opening, it is a good principle in the construction of individual shelters to keep the opening small and the hole deep. The shelter should be such that when a Marine takes cover from any atomic explosion the top of his head should be at least 2 feet below the opening.

The standing one-man foxhole appears to be the best from the point of view of individual protection. In a deep foxhole the individual is safely below the direct path of the blast wave, well protected from injuries caused by debris hurled about by the explosion and protected from the thermal effects. The deeper the hole and the smaller the opening at the top, the greater will be the protection from the shadow effect for any given set of conditions. The scatter effect of nuclear radiation and reflection of such rays from the back wall of the foxhole is a small percentage of the incident radiation, but definitely requires consideration. Two types of covers are usually suggested. One is a light cover which can give protection against thermal radiation; or the other is a very substantial cover consisting of one foot of earth or its equivalent which might be used to give added protection against nuclear radiation and strafing runs by enemy aircraft.

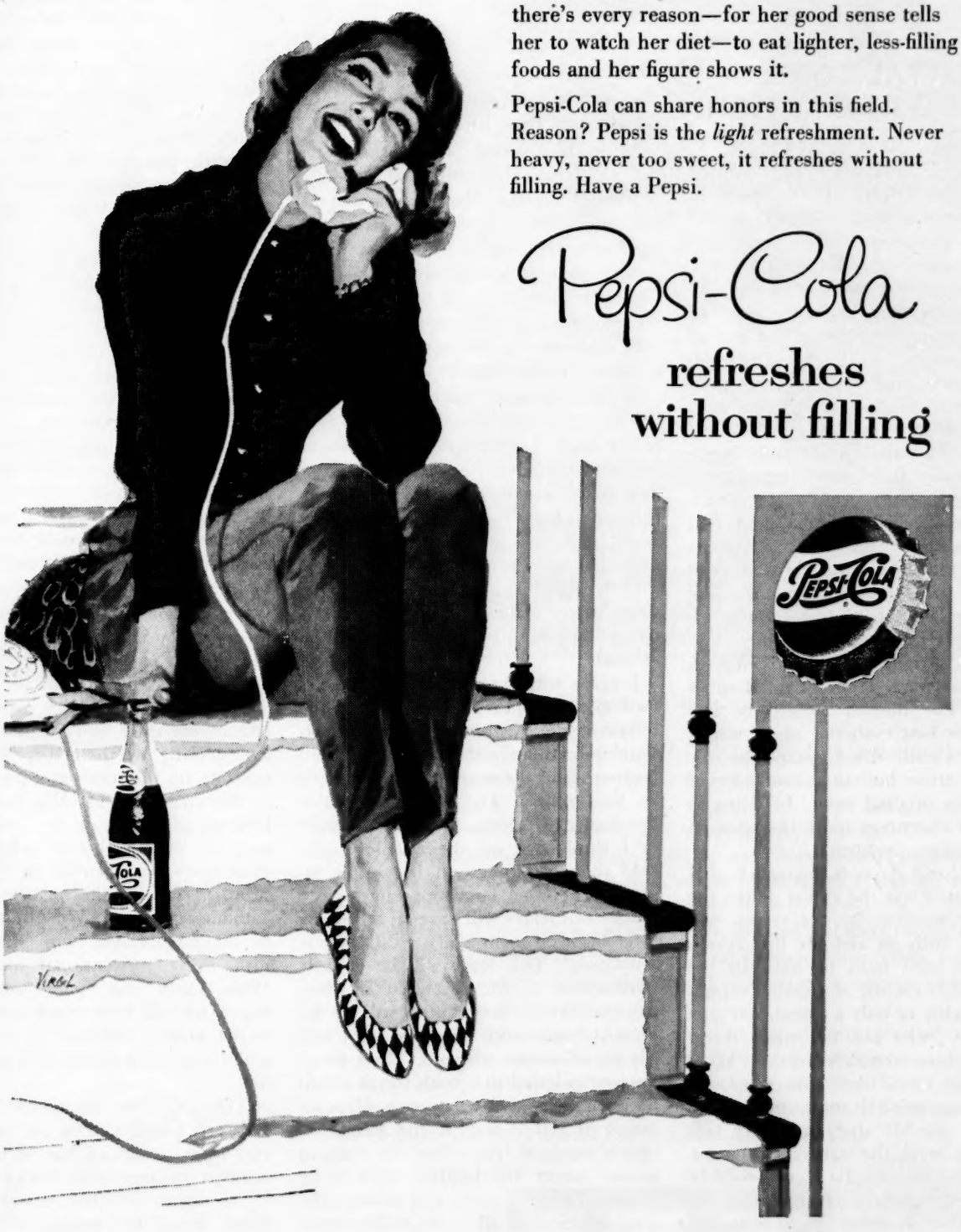
The use of overhead cover for the foxhole is undesirable in that, once the Marine has closed himself in, it is very difficult for him to hear the commands of the fire team or squad leader, especially if he is utilizing a heavy cover. Also, the use of a heavy cover, one that would approximate the one foot of earth that was mentioned earlier, would be very difficult for the Marine to operate because of the weight.

The answer for protection which is better than the overhead cover is the use of the "bunny hole" which was used so extensively during the period of the "stabilized front" in Korea in the later stages of the conflict. This consists of digging another hole or tunnel in the foxhole at right angles near the bottom, either on the left or right side. By this means the man will have at least 3 feet of earth above him, which is adequate protection against the triple threats of the atomic bomb, plus protection from air bursts from enemy artillery or strafing runs from enemy aircraft. The man also will be able to hear the commands of his fire team or squad leader. Without the overhead cover, he will be able to get into and out of his foxhole with greater speed and ease and also be able to save precious moments in getting into a fighting position immediately after enemy preparation fires.

The individual Marine when starting to "dig in" should first dig a shallow trench in which he can lie down. This would be the quickest means of getting below the surface of the ground in order to minimize the effects of an atomic bomb. Then, as time permits, he should keep developing his shallow trench until it becomes his foxhole with its "bunny hole."

In the past, the development of the crossbow, the musket, the rifle, the cannon and artillery, each have put fear and doubt into the infantryman's mind and heart until he learned how to defend himself against these developments. We now have the atomic bomb as the latest new development, but there should be no fear or doubt in the Marine's mind or heart if he will use the foxhole with a "bunny hole." By this type of individual passive defense, our Marine will be better able to discharge his duties of engaging the enemy with fire in front of his position and, if necessary, engage in hand-to-hand combat quickly if he penetrates our lines. USMC

Dateline Darling



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A REBUTTAL TO "ATOMIC ATTRACTION"

SAN DIEGO, CALIF. — Col R. E. Cushman's prize-winning essay entitled *Tactics of the Atomic Age, A Study in Principles* was extremely interesting and certainly stimulating. He developed a subject which we all should be constantly considering because, as the Colonel intimates, there is grave danger in restricting our planning for the war of the "near future" to the use of conventional tactics while we separately plan atomic age tactics for the "distant war" of "guided missiles, huge helicopters and push buttons." I certainly agree that we must base our contemporary planning on the premise that the atomic age battlefield is here *now*, and that tactics must not be the "old tactics found in the FMs — the old 2 up and one back of fond memory." As the atomic age battlefield is here *now*, so we must develop new tactics *now*.

I was intrigued by the Colonel's thoughts as were, I am sure, all other readers. The interest created by any essay is the best evaluator of its worth, and so as I write this I assume the role not of a critic but as a supporter of most of the original essay. In doing so I hope to encourage more thoughts on this immediate problem.

The Colonel states in his article that in any future war the threat of the use of atomic weapons by the enemy will always be with us and for this reason the tactics used must be basically the same whether the use of atomic weapons is an actuality or only a threat. He goes on to say, "who can tell when threat would become actuality?" . . . "What commander would dare take the awful risk of conventional concentrations on the mere gamble that the other side would not break the stalemate by a surprise atomic attack? To do so would be the grossest violation imaginable of the old rule that we never try to guess the enemy's intentions — we always operate with respect to his capabilities."

Later, when discussing the nature of the conflict and risks taken, the author states that the enemy determines the risks we can take, and that, "if we take risks beyond those he takes—look out!"

Again, in discussing atomic stalemate, the Colonel writes that, "it (atomic stalemate) becomes more precarious as one side starts to lose. Whereas at the start each side believes he can achieve victory without atomic attack; later, a desperate loser may not hesitate to use these weapons as a last resort, hoping by their surprise employment to tip the scales at a critical point in the struggle."

In developing the "future battlefield," the Colonel states that, "We must never forget that a battlefield is an arena where two opponents meet, and the conflict which ensues is the composite result of . . . their two diametrically opposed wills, the interplay of two types of tactics and the relative status of certain intangibles such as esprit. To develop tactics outside of this context is dangerous since lives and victory will be at stake."

I agree wholeheartedly with the author to this point, but I think that the following theory, that of "atomic attraction" is extremely dangerous and contradicts all of the sound assertions made by the author. The Colonel explains the theory of "atomic attraction" thusly:

"I think that on the atomic battlefield there will exist an irresistible attraction between large opposing forces. These formations will have an attracting force between them which I call 'atomic attraction.' This force will be entirely attributable to the fact that in close combat between major units will lie the principal assurance of safety from hostile use of atomic weapons. These weapons are so lethal that both forces would necessarily be destroyed by a blast directed at either one, if the forces are closely engaged. Therefore, the moment enemy forces are located we will be forced to order a rapid and almost total concentration of all forces within reach of the hostile formation. This is needed to accomplish a mission of destruction of the enemy and to achieve security from enemy atomic employment. Both objectives can be achieved by the very same action — 2 birds with one stone."

We all know that the Communist bloc controls the preponderance of the earth's manpower. We also are aware of the fact that in any future war Russia plus satellites would vastly outnumber us in men under arms. We recall clearly that both Russia and her "fellow traveler," China, have demonstrated complete disregard to huge numerical losses in WWII and Korea. They both have in the past and undoubtedly will continue to exploit the principle of mass in their tactics. Manpower is their forte, so why shouldn't they? They can afford to use fantastic numbers to win a battle or gain a victory. We, however, cannot afford such a luxury — neither physically nor morally. We have and will undoubtedly continue to rely on a preponderance of firepower as the basis for our tactics.

With this in mind, could we afford to take the awful risk which would be inherent to us in the theory of "atomic attraction"? The assurance "of safety from hostile use of atomic weapons" would, I am afraid, work only to our enemy's favor. The Communists would experience little reticence, I believe, in dropping high yield nuclear weapons over large forces of their own closely engaged with similar sized enemy forces if they could be assured of equal losses in enemy units. It would be as simple as playing checkers when you have nine kings and your opponent has only three.

We cannot afford to indulge in the theory of "atomic attraction" even in a war where the use of atomic weapons is only a threat because in the Colonel's words, "a desperate loser may not hesitate to use these weapons as a last resort, hoping by their surprise employment to tip the scales at a critical point in the struggle." At this point I will even go so far out on the familiar limb as to say that we should strike the word *mass* from our tactical dictionary and supplant it with the hackneyed phrase "atomic weapons." We can never play in the same league with the Communists using conventional mass tactics. When they use their conventional masses we will have to use our equalizer — the atomic weapon. It is our only counter to their masses, but it is a good one.

The way I see the battlefield of the future it would still be the interplay of two types of tactics, but we would not attempt to meet the enemy's conventional masses with like masses. Our key words would be "separation," "flexibility" and "distribution." Always moving, never offering a good atomic target, our units would advance with plenty of separation or even, yes, as a thin but

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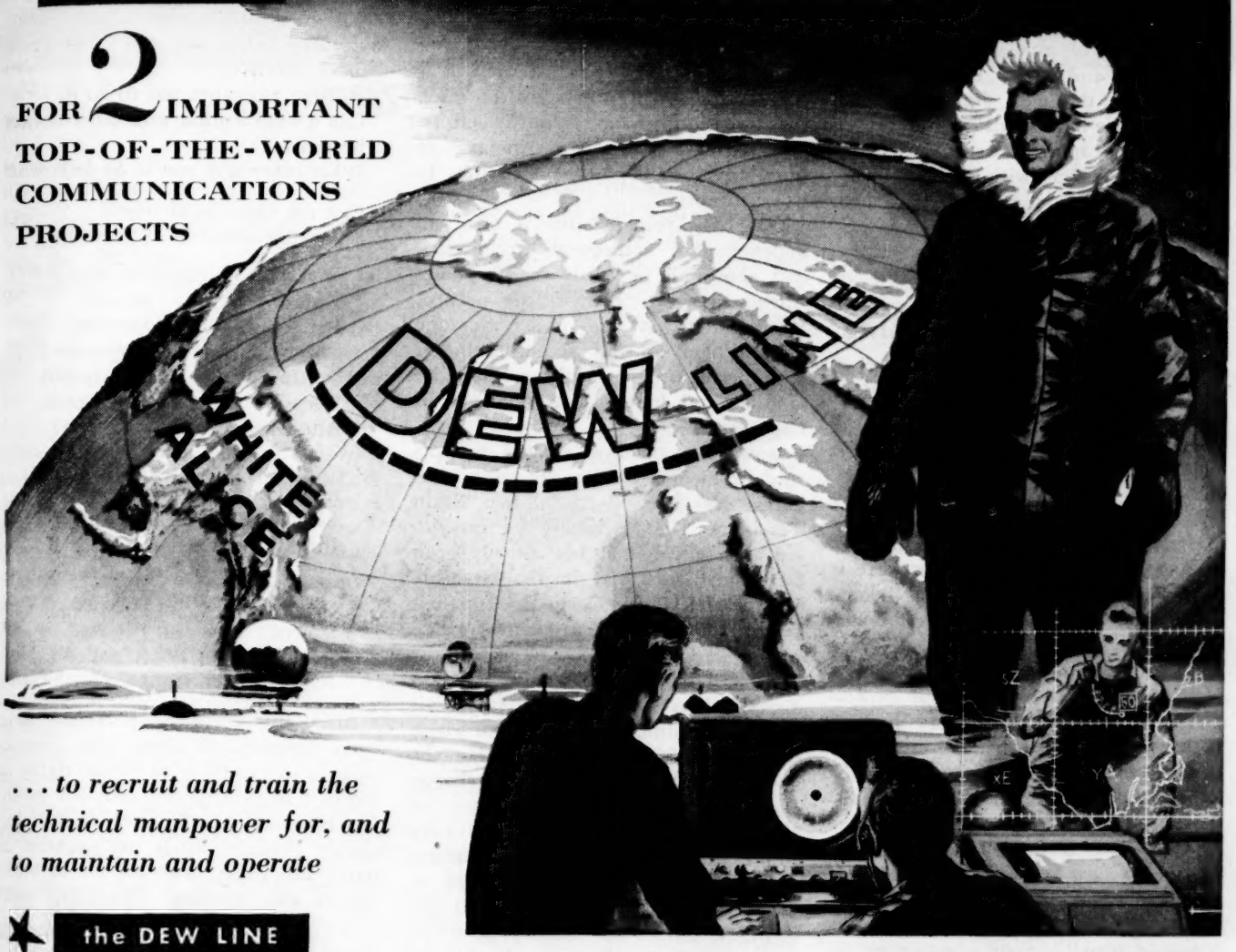

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powerful line. Minor opposition would be overcome with our superior conventional firepower. Enemy massings or strong points would be dealt with swiftly by atomic weapons. I do not believe that this type of battlefield is dependent on "a world of guided missiles, huge helicopters, and push buttons." We possess now the most important prerequisites. We have small arms and light supporting weapons fire superiority, air superiority, leaders with plenty of initiative, and highly trained, hardened troops that could be adequately supported by helicopters now.

Capt R. C. Schulze

BRAIN-TEASE PROBLEMS

EL TORO, CALIF. — The Marine Corps is manned by highly trained specialists, whose versatility and know-how should generate a flood of worthwhile ideas. Let's assist in stirring up these "breeding furnaces" of ideas and get them, in the "atomic sense," reacting. We have to insert our problems into the furnace to get them breeding. Break them down to specific problems before insertion in the furnace.

Inventing or idea creating is a form of endeavor arising primarily from the urge for creative work and self expression present in almost every normal individual. Improvements over known devices, tactics, or techniques, as distinguished from the basics or originals, appear to originate most often with men who know their fields of activity and build new ideas and devices based upon their experience.

The old cliche, "There is no indispensable man," is not appropriate in today's Marine Corps. For as our weapons and planes have come to be a complex system of people, who are not only trained in land, sea and air fighting, but all manner of technical specialties, the need for a dedicated Corps of professional Marines has never been greater. The incentives offered by private industry should not be incomparable to the recognition a nation gives to young people who make a career of military service. The important task is to recognize the importance of the man and encourage him to put forth his stored up unused knowledge.

Typically, ideas are kicked around at the lower echelon stage and then forgotten, as there is a reluctance in military men to do unsolicited paper work, and then impose it upon the next senior in command. This is a regrettable fact in light of the remarkable benefits and savings derived from the government's Beneficial Suggestion Program. But a solid pat-on-the-back at meritorious mast and the in-the-service-record entries have considerable compensatory worth and a more understandable answer stems from problems just cited.

It is a known fact that chance inspirations enter into the conception of many ideas that develop into outstandingly successful military and commercial products or techniques. Even in serious scientific and commercial research, it is chance, in a high proportion of cases, that leads to final success, but it is to be observed that chance works in favor of those who are exposed most often to its occurrence.

Our basic responsibility is to train, improve our equipment, techniques, and above all be ready in all phases whenever or wherever we are needed. What better way than to let everyone have a hand in this accomplishment? The specific problems will become more familiar and have a better chance of improvement.

Now after we have inserted our specific problems into the breeding furnaces, let's irritate them by "Brain Teasing." The machinery for instituting such a program has already been established by CMC in the establishment of the Marine Corps Development Center. The center has assigned a liaison officer with each Fleet Marine Force. These representatives maintain direct liaison with both the major air and ground units of the Force to which they are assigned. They provide the means for prompt and ready exchange of development ideas and information between the center and field units. Let's go one step further and add a representative to each of our divisions and air wings. These representatives will disseminate, collect and make preliminary reviews of the "Brain Teaser Form" and forward them to the Force Development Center representative who will review and forward to the Marine Corps Development Center.

The Brain Teaser form will be made up for each series of specific problems, i.e., beach landings, helicopter landing zone selections, mechanical improvements of devices, etc. After the Brain Teaser forms have been composed for a series, the specific problems as they arise will be added, stating its present accomplishments and what further is desired in accomplishments of this specific method. The forms will then be disseminated to the field.

BRAIN TEASER FORM

Specific Problem: To improve the method for selecting a helicopter landing zone in an unfamiliar enemy-held area.

Method Now Used: Maps and interpretation of aerial photos.

Brain Teasers: For a method or technique.

Is there a way to get similar results without using current methods?

Can a similar result be obtained without doing the job at all?

Is there an easier way to do it?

Is there a quicker way to do it?

Is there a surer way to do it?

In what other way can it be made more effective?

Is there a cheaper way to do it?

Can a combination with other devices be evolved?

What other way can it be improved?

Can the order be changed?

Arrangement	Precedence

Can the time element be changed?

Faster	Slower
Longer	Shorter
Chronologized	Perpetuated
Synchronized	Anticipated
Renewed	Recurrence
Altered	

Can the cause be changed?

Stimulated	Strengthened
Altered	Destroyed
Influenced	

Can the motion be changed?

Stilled	Speeded
Slowed	Directed
Deviated	Repelled
Barred	Lifted

After the brain teaser forms have been disseminated along with instructions as to exactly what we are trying to improve in each specific case, our breeding furnaces should, after establishing clearly in their minds the problem at hand, and going down the list of brain teasers start reacting. Producing satisfactory result in a high percentage of cases. To further help this along open discussions could be held which will help crystalize their thoughts into a workable solution.

To encourage our people to participate more freely in such a program, let's offer them something concrete. Under the present system it is not possible to grant direct monetary awards, but we can grant them indirectly. When a man comes up with a solution to one of our problems, his promotion composite score can be raised on a graduated scale according to the complexity or value of the problem solved. In addition he can be presented a certificate of merit at meritorious mast with a copy going in his SRB.

This same procedure can be used for officers and Staff NCOs, where a composite score for promotion is not used. A graduated scale of points can be used to advance them up the ladder in a promotion zone or decrease their waiting period in time in grade.

Let's face facts, everyone needs an incentive to produce to his utmost.

MSgt E. Ellis

passing in review

BOOKS OF INTEREST TO OUR READERS

100-Hour War . . .

100 HOURS TO SUEZ — Robert Henriques; 206 pages; illustrated; The Viking Press, NY. $3.00

This book is a synthesis of contemporary Israeli history, a battle report of the Sinai Campaign of 1956, and a forecast of things to come in the Middle East. The contents can be substantively divided into 3 parts. The first provides a resume of events leading to Israel's decision to invade Egypt. The central portion is a brilliant account of Israeli military action that drove Egypt out of Sinai in the brief period of 4 days. The last chapter is at once an evaluation of the prospects for this area, from the author's point of view, and an arsenal of thought stimulators for anyone concerned with the Middle East, i.e., US Marines.

Col Henriques does much to create an atmosphere of authenticity and credibility to his recounting of Israeli-Arabian affairs in the introduction and first chapter. This is important for certain connotations might be drawn, because of his ethnic origin, that do not hold true. He stresses that, although he is a Jew, he is anti-Zionist and not an apologist for Israel.

Of importance to the reader is the author's explanation of the methods used in gathering the material. The fact that he was not present in either Israel or Sinai during the 100 hours raises the question of authenticity. However, the access he had to Prime Minister Ben-Gurion, the Israeli Chief of Staff and commanders on all echelons just prior to and immediately subsequent to the campaign provides ample evidence that he was extremely well informed.

Prior to relating the narrative of the campaign itself the author portrays the principals involved in the action. Ben-Gurion was interviewed in detail. Gen Dayan, the 41-year-old Chief of Staff, was frequently visited and consulted. It was through Dayan's collaboration that Henriques was able to obtain the concept of the operation, the details of Israel's wild, 4-day mobilization, and knowledge of the effective ruse or cover that resulted in nearly perfect military security. Such excellent sources are not normally available to correspondents.

From the people involved, the author moves to the circumstances leading to Israel's decision to strike first.

The author's account of the military maneuver and small-unit combat action is clear, vivid and at times humorous. *100 Hours To Suez* thoroughly integrates the operation from beginning to

end and very ably details the "other means" of modern warfare . . . economic, political and unconventional.

Reviewed by Maj T. D. Hess

ED: *Maj Hess is with Extension School, MCS.*

The Forgotten War . . .

DEFEAT INTO VICTORY—Field Marshal Sir William Slim; 551 pages; Cassell Ltd., London. $3.50

Field Marshal Sir William Slim is today the popular Governor General of Australia. His book, published last year, is ample proof that he was among the best of Britain's WW II fighting generals. He is also one of their best writing generals, for this is a tremendous book. It is written in a sincere, frank, honest style by the only man who could give you such an all encompassing view of the "forgotten war," in Burma.

General Slim reached the peak of his long Army career as Commander of the British Fourteenth Army in India and Burma. A career that began in 1914 when he was first commissioned. A career which saw him fighting in WW I in France, Belgium, Gallipoli and Mesopotamia. Between the wars he sharpened his art in India. Later he polished his tactics while teaching at the Staff College in England. The tactics he taught he later expertly carried out against the Japanese in Burma.

The book is divided into 6 parts. Part I is titled "Defeat." Part VI is titled "Victory." The 4 parts in between tell you exactly how he did it. As a thought provoking postscript, a chapter is added entitled "Afterthoughts." Here, are his thoughts on warfare of the future and how it can be related to past wars, especially with his experience as Commander of the Fourteenth Army.

Gen Slim was sent to Burma in the early days of 1942 to take over the Burma Corps, composed of the 1st Burma Div and the 17th Indian Div.

On arrival he faced chaotic conditions. His intelligence of the enemy was bad, his Corps was poorly trained and equipped for jungle warfare, units were understrength from battle casualties and sickness, there was 80 miles between his divisions, and morale of his troops was disturbingly, though understandably, low. On top of this the onrushing Japanese had air superiority and on ground they held the initiative.

From May until December 1942, Gen Slim now in command of XV Corps, began the tremendous task of preparing his divisions for their re-entry into Burma. During this period the reader follows this leader as he builds his foundations and plans for final victory.

There is perhaps only one place in the book that will cause Marine readers to raise their eyebrows. At one place he said: "We were helped, too, by a very cheering piece of news that now reached us, and of which, as a morale raiser, I made great use. In August and September 1942, Australian troops had, at Milne Bay in New Guinea, inflicted on the Japanese their first undoubted defeat on land. If the Australians, in conditions very like ours, had done it, so could we. Some of us may forget that of all the Allies it was Australian soldiers who first broke the spell of the invincibility of the Japanese Army; those of us who were in Burma have cause to remember."

Either General Slim was misinformed or he took poetic license at this point for the 1st Marine Div landed in the Guadalcanal-Tulagi area of the Solomons on 7 August 1942. During the days which followed they defeated permanently several thousand Japanese in capturing Tulagi, Gavutu-Tanambogo, and decisively defeated the Japanese on Guadalcanal at the Battle of the Tenaru. All of this could be considered as handing the Japanese an undoubted defeat, before our friends the Australians landed at Milne Bay on 25 August.

NEW BOOKS

The books listed below have been received recently by the GAZETTE *for review. More detailed reviews of many of these books will appear in subsequent issues. These books may be purchased at the* GAZETTE BOOKSHOP *now. Association members who are interested in reviewing books should notify the Editor and Publisher.*

PRINCIPLES OF PERSONAL FINANCE FOR SERVICE PERSONNEL — *Associates in Department of Social Sciences, USMA. Military Service Publishing Co., Harrisburg, Pa. $2.00*

This book is intended to assist the serviceman in solving the ordinary and extraordinary problems in the management of his personal finances. It deals with the serviceman's financial problem, his income, travel allowances, allotments and pay accounts, taxes, renting or buying a house, savings and investment, the family budget and related financial matters.

FAMOUS FIGHTERS OF THE SECOND WORLD WAR — *William Green. Doubleday, NY. $3.95*

Detailed histories of the most famous airplanes used by Britain, the United States, Germany and Japan during WWII. The volume is illustrated with a wealth of detailed drawings and a unique collection of photographs. For the first time is told the story of the first operational jet fighter, the Messerschmitt Me 262. The foreword is by Group Capt "Johnnie" Johnson, DSO, DFC.

MEDICAL EFFECTS OF THE ATOMIC BOMB IN JAPAN—*Edited by Ashley W. Oughterson and Shields Warren. McGraw-Hill, NY. $8.00*

Based on the 6-volume report of the Joint Commission for the Investigation of the Effects of the Atomic Bomb in Japan, this volume outlines the methods of this large-scale medical research project as well as its statistical findings and their bearing on continuing studies of the effects of damaging radiation on living organisms.

EUROPE IN COLOR — *Editors of Holiday. Doubleday, NY. $7.50*

Here are nearly 200 of the outstanding full-color photographs of the countries of Europe that have appeared in *Holiday* during the past 10 years. The pictures were taken by some of the world's most expert lensmen. The book contains photographs of some of Europe's most spectacular scenery, with emphasis on vacationlands. Allan Nevins wrote the Introduction.

If you want a clear, concise picture of the war in Burma, and if you want a top flight soldier's thoughts on leadership and watch a master craftsman fight brigades, divisions and corps in battle, *Defeat into Victory* is highly recommended.

Reviewed by LtCol L. E. Hudgins, Jr.

ED: *LtCol Hudgins is Marine Corps representative at UK Amphibious Warfare Center, Poole, England.*

Why? . . .

AT WHATEVER COST — R. W. Thompson; 204 pages; Coward-McCann, Inc., NY. $3.50

This is the story of the Dieppe Raid. I called it a story advisedly because the author has made his account come alive with personalities. It reads like fiction and the result is an adventure story of the highest order. All warfare, in the final analysis, is an intricate fabric woven of the exploits and failures of individuals.

R. W. Thompson, the author is a war and foreign correspondent who has pursued his trade in three wars and in all parts of the globe. He has a knowledge and understanding of the military which he gained at first hand, going through the ranks to become an Army captain. In addition, Mr. Thompson had access to the official British records as well as the official report of the German commander, von Runstedt.

The organization of *At Whatever Cost* is excellent. There are 3 parts entitled "Jubilee," "Vanquish" and "Aftermath." "Jubilee" was the code name of the landing and that part of the book naturally concerns itself with getting the troops ashore. "Vanquish" was the code name for the withdrawal and a more apt one could not have been chosen. In these first 3 parts of the book, each beach is treated individually. This is an excellent method of narration because each beach was in reality a separate operation. "Aftermath," the final part of the book, relates the propaganda battle following the operation and sums up.

Almost from the first page, the military reader will want to demand, "Why?" and his frustration will grow and grow for there is no answer to be found in the book. The men who planned the Jubilee operation must have believed it would be successful. Why else did they authorize its execution? No matter how I look at it, I can find no reason for that belief. I still want to demand of the planners, "Why?"

One of the reasons for the Dieppe Raid, I was amazed to discover, was to lure the German Air Force into a decisive air battle. From time to time throughout the book, this fact is mentioned and finally a chapter is devoted to "The Air Battle." As with everything else, I could only ask a weak and resigned, "Why?" From the account, I suppose this mission was successful. I'm not certain.

Reviewed by Col W. F. Prickett

ED: *The reviewer is Senior Member, Advance Base Problem, and as such has visited in England with individuals who took part in this raid.*

Prisoners' Plight . . .

A RIDE TO PANMUNJOM — Duane Thorin. 303 pages. Henry Regnery Co, Chicago. $4.00

"I am an American fighting man. . . . . I will trust in my god and in the United States of America." So states Executive Order 10631 dated 17 August 1955.

The author, Ens Duane Thorin, an enlisted Naval pilot during WWII, and a helicopter pilot during the Korean War, was captured in early 1952 as a result of an unsuccessful rescue mission behind enemy lines. His book is a novel about American prisoners of war in Korea.

Riding in a truck with fellow prisoners of war in September 1953 towards the "Gateway to Freedom" at Panmunjom, Sgt Wolfe, the leading character in the novel, has time to think about the behavior and conduct of his many fellows during their time as a prisoner of war. The flashback technique utilized by the author provides for an interesting narrative, although this technique of introducing and describing the various persons in the novel does, on occasion, lend itself to a somewhat rambling overall story. However, the sincerity, realism and frankness of the description and conduct of each of the prisoners of war, as well as the insight into the personal characteristics of each, more than overcome this factor. Interwoven throughout the novel are the descriptions of the techniques and methods of "brain washing" employed by the captors. Of particular interest is the manner in which seemingly little events on the part of the captors do—after many cumulative events—affect each prisoner as he approaches that certain point. Realistically described are the methods employed by the prisoners themselves to counteract the actions of the captors.

Reviewed by LtCol J. R. Blackwell

ED: *LtCol Blackwell, a friend of the author, is an instructor at Senior School, MCS.*

BOOKS ON PARADE

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1957 prize essay contest

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If, in the opinion of the Editorial Board, no essay entered in the contest is of sufficiently high standard of excellence, it is empowered not to award a prize in the class or classes concerned. Awards may be split among two or more entrants.

Material dealing with any facet of a new concept of warfare on ground or air operations or tactics is particularly desired. Historical monographs are not solicited unless they can point up some development or far-reaching thought that affects us directly today.

In addition to the prizes awarded, one or more essays may receive "Honorable Mention" and be accepted for publication. Even those not receiving a prize or honorable mention may be accepted for general publication in the GAZETTE. Compensation for such articles will be as adjudged by the Editorial Board.

GENERAL RULES

1 — Contestants may write on any subject of military interest but essays may not exceed 5,000 words and they must be original, as well as analytical or interpretive.

2 — They must be typewritten, double-spaced, on paper approximately 8½ x 11, and must be submitted in triplicate — each copy complete in itself, legible and firmly bound.

3 — The name of the competitor shall not appear on the essay. Each essay heading shall contain an identifying phrase consisting of the last 5 words of the essay, in addition to the article. This phrase shall appear:

a) On the title page of the essay.

b) On the outside of a sealed envelope containing the name (rank and serial number, if any) of the competitor.

c) Above the name and address of the competitor, inside the identifying envelope.

4 — Essays and identifying envelope must be mailed in a large, sealed envelope marked Prize Essay Contest Group (I, II, III as appropriate) to the Secretary-Treasurer, Marine Corps Association, Box 1844, Quantico, Va.

5 — Essays must be received by the Secretary-Treasurer prior to 1 October 1957.

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